# Law and Finance “at the Origin”

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**Abstract**

What are the key determinants of financial development and growth? A large literature debates the relative importance of countries’ legal and political environment. In this paper, we present evidence from ancient Rome, where an early form of shareholder company, the *societas publicanorum*, developed. We show that the *societas publicanorum* flourished in a legally underdeveloped but politically supportive environment (Roman Republic) and disappeared when Roman law reached its height of legal sophistication but the political environment grew less supportive (Roman Empire). In the Roman case, legal development appears to have mattered little as long as the law as practiced was flexible and adapted to economic needs. The ‘law as practiced,’ in turn, reflected prevalent political interests. After discussing parallels in more recent history, we provide a brief overview of the literature on law and finance and on politics and finance. Our historical evidence suggests that legal systems may be less of a technological constraint for growth than previously thought—at least “at the origin.”

## 1 Introduction

Understanding the causes of financial development and economic growth is central to research agendas in many fields of economics, ranging from macroeconomics and microeconomics to finance. The law and finance literature suggests a causal impact of countries’ legal systems.[1] Another strand of the literature emphasizes the role of the political environment and argues that the effectiveness of institutions varies considerably with the political support they receive.[2]

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[1] La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997) and (1998).

[2] Rajan and Zingales (2003); Acemoglu and Johnson (2005); Pagano and Volpin (2005a).

Definitive empirical evidence for either of those approaches is hard to come by. Given the scarcity of perfect natural experiments, careful and detailed analyses of individual cases are a valuable part of the literature, even if they stop short of proving causality. In fact, much of the literature revolves around specific historical examples, mostly taken from the last two centuries.[3]

This paper expands the current body of evidence to a much earlier time period: two thousand years ago in ancient Rome. We focus on a specific cornerstone of financial and economic development: the emergence of the business corporation. We propose that, contrary to widespread belief, the earliest predecessor of the modern business corporation was not the English East India Company nor the medieval *commenda*,[4] but the Roman *societas publicanorum*, i.e. the "society of government leaseholders." While this claim alone may be of independent historical interest, we use the Roman case to shed light on the "law and finance" versus "politics and finance" debate. The Roman evidence illustrates the limitations of the existing law and finance theories. In the case discussed here, legal restrictions (or the lack of legal development) per se appear to matter little as long as the law *as practiced* is flexible and adapts to economic needs. In fact, one of the most important periods of legal development ("classical Roman law") appears to be negatively correlated with financial and economic development. We also show that 'the law as practiced' reflects prevalent political interests.

In addition, the historical evolution of the Roman *societas publicanorum* allows us to better understand the political and economic preconditions for the development of the business corporation in modern history, an organizational format that has been essential for economic development. The Roman case illustrates the balance of power between the political elites and the business elites that determines whether this organizational form can survive and expand.

We first provide a historical introduction to Rome's economy and legal system. This brief overview helps to explain how an ancient economy could arrive at a surprisingly sophisticated level of financial structure. We emphasize the flexibility in the creation and interpretation of legal rules, which allowed new business forms to be invented through modifying preexisting commercial and social institutions (Section 2.1). We then describe the role and business activities of the publicans, from the 5th century BC until their demise under the Roman emperors (Section 2.2). We argue that, at the height of its

[3] Examples are Engerman and Sokoloff, (1997) and (2002); Berkowitz, Pistor, and Richard (2003); Lamoreaux and Rosenthal (2005); and Haber, Razo and Maurer (2003).
[4] Ekelund and Tollison (1980) and Gower (1969), p. 22. Kindleberger (1984) characterizes, more generally, alterations of the "true" partnership as the earliest forms of business organization but views the medieval *commenda* as the starting point (p. 195). Baskin and Miranti (1997) explicitly assess the development of the business organization under Greco-Roman law as restricted to partnerships.

development, the *societas publicanorum* resembled the modern shareholder company along several core dimensions: its existence was not affected by the departure of partners (differently from the regular *societas*, i.e. the Roman partnership), and it could issue traded, limited-liability shares (Section 2.3). We then discuss the causes of the corporation's demise under the Roman Empire (Section 2.4). In particular, we point out how a change in political interests triggered its demise at a time when the general legal framework had substantially evolved and was, if anything, better able to support the institutional format of the corporation. That is, we evaluate the demise of the *societas publicanorum* in the light of a drastically changing political environment, the shift from Republic to Empire. In Section 2.5, we summarize the insights from this historical evidence and point to parallels in the later development of the East India Company and other parallel cases from modern history.

We link the historical evidence to the modern debate on the causes of financial development and growth. In Section 3, we first provide a brief overview of the literature on law and finance and on politics and finance. While the law-and-finance literature emphasizes the importance of a growth-fostering legal environment, the politics-and-finance literature argues for the predominance of political interests in determining the growth path of an economy. Our overview emphasizes research that has found less attention in previous reviews but echoes the message in our analysis of the *societas publicanorum*: literature on the role of different business formats (such as the shareholder company) and their characteristics (such as limited liability, agency, and representation). These historical papers highlight that smooth access to financing requires more than investor and creditor protection. Restrictive business formats impose transaction costs on managers and may impede the funding of promising enterprises.

We discuss the implications of the rise and fall of Roman corporations for the current debate on law versus politics, focusing on two aspects. First, the fundamental assumption underlying the law and finance approach is that the legal environment causally affects economic development. The literature attributes better financial development in common-law than in civil-law countries to the legal flexibility inherent to common-law systems and the lack thereof in civil-law systems, often using Roman legal origin as a proxy for a rigid and growth-hostile legal environment. Our historical evidence (from the time period that spawned Roman law) suggests that legal systems may be less of a technological constraint for growth than previously thought—at least "at the origin." Roman law provided a flexible and nurturing legal environment for financial development during the Republic, accommodating fundamental advancements such as a corporate business format. In fact, the case-based evolution of Roman law closely resembles today's common-law systems.

In the same vein, the case of the *societas publicanorum* illustrates that the functioning of an organization may develop independently of formal laws regulating company formats. Business formats affect firms' access to external financing, stability (or "longevity") of firms, ease of representation by individual managers, and the rights and obligations firms can assume. An advanced (corporate) format facilitates its operation. However, analyses focusing on the formal law rather than the 'law as practiced' risk misconstruing the actual state of organizational development and its implications for finance and growth.

Second, if it is the 'law as practiced' that matters, the next question is what affects the practice of law and its responsiveness to economic needs. Here, the historical evidence points to the role of political pressure. The law as practiced appears to serve economic needs if and only if aligned with the dominant political interests. Differently from the view put forward in some of the politics and finance literature (e.g., Perotti and van Thadden, 2006), the Roman case does not provide evidence that the influence of politics acts via its influence on law, i.e., the view that the law matters, but that the choice of the law is endogenous to political forces. What we see in the Roman case is that formal contract and business law develop orthogonally to political changes. Formal law has little influence on economic outcomes because it is trumped by political forces.

While this dominance of politics over law is only a historical observation, based on a specific, non-generalizable case , the Roman case presented here overcomes a basic identification problem faced in the empirical analysis of law, politics, and finance: As law and politics evolve over time, they often develop in the same direction—either fostering or limiting financial development. That makes it difficult to attribute financial development to either source. The *societas publicanorum* provides a rare case in which the evolution of law and politics diverged. During the Roman Republic, when Roman law was still far from a complete body of civil law ("pre-classical" period), political interests demanded stable business organizations that could raise large-scale financing. During the Roman Empire, when Roman legal science peaked ("classical" period) and the law-related transaction costs of economic interaction diminished, political interests reversed and grew less favorable toward the smooth operation of large-scale economic activities. Financial contracting regressed despite the progress in legal framework. Our findings suggest that economic development that coincides with government interest requires little formal legal underpinning other than a willingness to sanction experimentation with existing legal forms on a case-by-case basis. Without government support however, it may wither despite an existing legal framework.

It is important to emphasize that these insights do not rule out that law does affect financial development. The Romans might never have arrived at developing an early type of corporation without their advanced legal environment. Nor do we observe the counterfactual history where the formalization of Roman law in the classical period gives explicit sanction to legal forms such as the *societas publicanorum* and codifies their rights. Rather, the historical case illustrates that a failure to account for the political economy and its effect on the legal environment leads to a misreading of the relationship between law, finance, and growth.

# 2 A Historical Case Study: the Roman Corporation

## 2.1 Roman Economics and Roman Law

Historical evidence about the publicans and their companies stretches from the beginnings of the Republic into the Empire. The height of their activities falls into the last two centuries BC. We provide a brief overview of the economic and legal development at the time. Table 1 provides a chronological overview.

### *Economics*

A starting point for our analysis is the question of how an early economy could be sophisticated enough to generate a business form as advanced as the *societas publicanorum*. The literature survey by Temin (2006) investigates the broader context of this question. Using evidence from grain markets, employment contracts, the manumission of slaves, and loan contracts, Temin argues that Rome's economic institutions during the Early Empire were more market-oriented than even in the medieval economy many centuries later (see also Temin, 2001). In this subsection, we provide examples that illustrate the same point and extend the discussion to the period of the Roman Republic.

From the third to the first century BC, Rome grew from a rural community to a power stretching all over Italy and then beyond the Mediterranean, including West and South Europe, Asia Minor, the Near East, Egypt, and North Africa. In the wake of this geographic expansion (see Table 1), large-scale commerce, industries and financial sectors developed, and the volume of trade exploded. This appears to be particularly true for seaborne trade. For example, Hopkins (1980) infers from data on 545 dated ancient shipwrecks, found near the coasts of France, Italy, and Spain, that interregional trade was higher in the period from 200 BC to AD 200 than either before or during any time in the following millennium. Analyses of the number of silver coins minted in Rome during the late Republic (157-50 BC) supports this hypothesis: the circulation of coins increased tenfold over that sample period.

The wide geographical expansion of Rome as a single political entity provided favorable conditions for the establishment of large product markets. Kessler and Temin (2005) argue that there was an integrated grain market stretching over all of the Mediterranean. Analyzing historical data on grain prices in Rome, Northern Italy, Sicily, Spain, Turkey, Palestine, and Egypt, they find a strong linear relationship between prices and distance from the production site, which appears to reflect transportation costs and suggests a functioning market and price mechanism. Similarly, Hopkins (1980) uses the spread of silver coins, minted in Rome, across the different regions of the growing Roman state to illustrate its integration into a single monetary economy. He plots the number of catalogued Roman coins found in Southern Germany, Northern Italy, Britain, France, the Balkans, and Syria, over the years AD 50-200. The positive correlation of time trends across regions suggests a smooth flow of money across the Empire, consistent with the view that Rome had become the monetary center of the known Western world in the first century BC (Cunningham, 1902, p. 164). The coin-flow also corroborates the empire-wide operation of many other product markets (Temin, 2001).

Technical progress supported the growth of the Roman economy. For example, Wilson (2002) argues that the discovery and spread of water-powered devices had a causal impact on economic development in Rome. He shows that the use of water-powered mining technology is strongly correlated with the volume of metal extraction. The estimates of extraction volume are based on analyses of Greenland ice cores, which record the atmospheric pollution from silver, lead, and copper extraction in different periods throughout history. A time-series plot of the concentration of lead between 962 BC and AD 1532 shows a steep increase in the first century BC, a somewhat lower plateau in the first century AD, a further decrease in the second century, and an even lower level up to the fifth century. Similar data of copper pollution reveals peaks from the first century BC to the second century AD and subsequently lower levels – all the way until the Industrial Revolution. The data suggests that advancements in Roman mining technology led to enormous increases in metal extraction. As we will see, the decline in production mirrors the decline of Rome's *societas publicanorum*, though with some time lag.

A broad overview of the archeological evidence of technological innovation and the speed of technological transfer can be found in Greene (2000), especially for the late Republic and early Empire. Examples include the spread of grape- and olive-pressing equipment and water-powered grain-mills throughout the Mediterranean, bone dimensions of cattle that suggest selective breeding, and remains of pumps and water-wheels that allowed mining below the water table in the North-western provinces of Gaul and Spain.

The Roman financial system was also fairly developed. Temin (2004a) documents that sophisticated financial intermediaries – bankers (*argentarii*) and brokers (*proxenetae*) – pooled and distributed funds effectively across the Roman economy. Evidence from the early Roman Empire includes the so-called *Muziris* papyrus of a large maritime loan, which appears to be copied from a standardized maritime loan contract; catalogues of loans in Roman Egypt; and numerous literary sources such as Livy's (*hist.* 35.7) account of the evasion of interest rate regulation via lending to foreigners. These sources report various lending practices, bank branching, loan transfers, and lending activities of temple endowment and local governments. Related to the context of our analysis, Temin points out that the publicans functioned as de-facto deposit institutions for the Roman government and provided interest income on revenues they collected for the government.

These details about the ancient Roman economy illustrate the fast-paced economic development during the late Roman Republic and early Empire, in which we have to place the development of a company format as advanced as the *societas publicanorum*.

***Law***

Our knowledge of Roman law in the period prior to the Punic Wars (middle of the third century BC) is limited to the famous Twelve Tables from 450 BC, which are generally perceived to be the foundation of Roman law. As far as we can judge from the surviving text fragments,[5] the Twelve Tables were not an exhaustive codification of all legal rules. Rather, they defined various private rights and legal procedures and ensured basic economic and political rights for the plebeians in their power struggle with the patricians.

The jurists of the last two pre-Christian centuries, the pre-classical period, developed a "legal science" with formal legal concepts and systematization. This development has often been attributed to the encounter with Greek philosophy (Kaser, 1980, p. 4). It is also the period in which the activities of the publicans and the formation of *societates publicanorum* achieved their greatest expansion and development.

The "classical" period during the first 250 years AD marks the height of Roman law. The law of this period exerted a large influence on legal development throughout the world and throughout history. The discussion about "Roman-law origin" in the modern law and finance literature is only one example. Among the different fields of law, however, only the private (or civil) law has had this influence, either directly, as the foundation of modern private law, or indirectly, through the modern Civil Codes.[6]

Roman private law did not undergo systematic codification until the beginning of the sixth century AD. During the pre-classical and classical periods, legislated statutes (acts *[leges]*, plebeian resolutions *(plebiscita)*, or senate resolutions *(senatus consulta)*) played a fairly small role. Rather, the law emanated from the advice of legal experts, the *responsa prudentium*, to the judicature, i.e., to the *praetor* (judge), to the *aediles curules* (senatorial superintendents), and to the governors in the provinces. These magistrates and

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[5] See Schöll's *Legis XII tabularum reliquiae* (1866) for a widely cited reconstruction of the Twelve Tables.

[6] Civil-law codifications replaced the direct application of Roman law in many countries, starting at the end of the 18th century (Kaser, 1980, p, 2). Note that even civil code traditions that are not commonly characterized as having Roman legal origin typically borrow directly from Roman law.

their jurors, called *tribunales*, usually had no legal training, but appointed jurists into a committee of legal experts, the *consilium*. The appointment as an expert was honorable and desired among lawyers, who usually belonged to the aristocratic class (patricians) and also advised plaintiffs and defendants. Based on the experts' opinion, the magistrates would grant actions (*actiones*), defenses (*exceptiones*) and other legal remedies. Those expert opinions shaped the legal system, even if they had no formal legal power. Hence, Roman law textbooks often characterize Roman law as "juristic law" (e.g. Schulz, 1951; Buckland and Stein, 1963). Since legal experts did not discuss abstract concepts but concrete cases of current interest, Roman law developed in step with the legal issues of the day. In fact, Roman-law scholars like Kaser (1980) and Duff (1971) liken Roman law to English law today: largely free of abstract concepts and essentially "case law." This gave the Roman law an enormous degree of flexibility, providing the ability to cope with the transformation of Rome from a rural community to a large empire.

Under the Principate, the emperors' decrees (*constitutiones*) started to be recognized as binding legislation. The emperors, however, imposed little constraint on the autonomous, case-driven legal development. The pre-existing body of law continued to evolve in a similar fashion as before.

Systematic codification finally took place under the Byzantine Emperor Justinian. Justinian aimed at documenting and codifying the full body of Roman law in the so-called *Corpus Iuris Civilis*. In AD 533 and 534, the main parts of the *Corpus* were issued: the *Institutes* (an introductory textbook), the core piece of the *Digest*, or *Pandects* (documenting various legal debates), and the *Codex* (imperial constitutions from the Principate). Our knowledge of Roman law stems mostly from the *Corpus Iuris Civilis*.

The case-oriented evolution of Roman law helps us to understand how the creation of a quasi-corporation could occur without formal legislative changes and recognition of legal concepts often considered indispensable, such as limited liability, agency and representation.[7] For example, Roman law never recognized limited liability for private businesses – besides removing the right of a creditor to kill or sell into slavery a debtor if he failed to pay (*lex Poetelia Papiria de nexis*) in 326 BC. Instead, Rome accommodated the demand for limited liability by exploiting the *peculium* of slaves. Slaves were legally "things" and, as such, could not own other things. In practice, however, they were allowed to accumulate earnings and other property, denoted as their *peculium* (allowance). They became the legal owner after manumission, i.e., when granted freedom. To remedy the lack of a business format with limited liability, Romans employed "company slaves" (*exercitores servi communes non volentibus dominis* or *servi communes ne-*

[7] For more details see Malmendier (2002), pp. 212-213.

*gotiatores*) as managers and funded them with a *peculium* for business transactions. That way, they avoided liability for business conducted by the slaves beyond the funds with which they provided them.[8]

Similarly, Rome never instituted the law of agency. Instead, to meet the increasing demand for binding representation in business matters in Rome's growing economy, the Romans employed the *patria potestas*, i.e., the power of a Roman father over his (adult) children, and the ownership of slaves as a form of agency.[9] The Roman *pater familias* and *dominus* could act through children and slaves, in which case he was liable for their offenses.[10] Slaves managed estates and arranged trading and banking transactions on the master's behalf. Even top managers were typically selected from among slaves, which helps to explain the astonishingly common phenomenon of Romans "placing themselves into slavery." Free men sold themselves into slavery in order to attain a high position in the enterprise of a senatorial house,[11] a striking example of how the Romans achieved modern organizational functions without formal legal reform by expanding the interpretation of existing legal institutions.

## 2.2 Who Were the Publicans?

The *societas publicanorum* owes its creation to Rome's Republican system of government. During its five centuries of existence, the Roman Republic never assembled any sizable bureaucracy. Similar to the ancient democracy in Athens, Rome distrusted the continuity of power embedded in a bureaucratic state machine. Instead, public services were contracted out and public income sources were leased to private entrepreneurs. These private contractors were called "government leaseholders" or publicans (*publicani*). As Ulpian writes in the Digest (*Digesta* 39.4.1.1):

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| *Publicani … sunt qui publico fruuntur, nam inde nomen habent.* | Publicans … are those who deal with public property; that is where their name comes from. |

And shortly thereafter (*Digesta* 39.4.12.3 [38 ad ed.]):

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| *Publicani autem dicuntur, qui publica vectigalia habent conducta.* | Those are called publicans who conduct the exaction of public taxes. |

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[8] Brentano (1925), p. 143; Földi (1996), esp. the summary on p. 211. For a discussion of the exceptions, in which the liability went beyond the *peculium*, see Honsell, Mayer-Maly, and Selb (1987), pp. 378-381.

[9] On the law of agency and its substitutes see Garnsey and Saller (1982), p. 33, and Crook (1967), p. 60. On the same topic in the context of the Roman labor market see Temin (1994b), p. 536.

[10] Taubenschlag, Law of Greco-Roman Egypt, pp. 307 ff., 505 ff.

[11] Ulpian (*Digesta* 28.3.6.5) denotes such slavery as *ad actum gerendum*, i.e., to secure the post of an *actor*, who runs the senatorial household.

Since the Roman senators were not allowed to participate in the government leases, a separate class of entrepreneurs emerged, later often equated with the knights (*equites*).

The business activities of the publicans are described in Badian's classic work titled *Publicans and Sinners* (1983), and in Malmendier (2002).[12] The earliest reports refer to the 5th century BC. Ancient historians such as Dionysius of Halicarnassus and Livy provide accounts of religious and ceremonial services as well as construction jobs contracted out to private entrepreneurs. Another famous example is the feeding of the white geese on the Capitol. The geese received government-sponsored meals since, in 390 BC, their honking had warned the Romans of the attacking Gallic troops.[13] According to Pliny[14], the "geese feeding program" was leased out to the publicans.

Over the course of the Republic, an increasing volume of public works were outsourced, until the publicans were dealing in practically every state department's business (Cunningham, 1902, pp. 157 and 162). The three main areas were:

1. provision of goods and services for the public,
2. utilization of public property, and
3. collection of public revenues.

The key element in the first group of contracts was the provision of supplies to the Roman army.[15] This included the regular supply to fixed and stationary garrisons as well as the less predictable supply demands during wartime. We have evidence of the latter even for the imperial period when the publicans were otherwise in demise. The revenues from these contracts were astonishing; as Badian (1983, p. 29) shows, they were equivalent to the annual pay for 10,000 soldiers (about 1.2m *denarii*) in the case of a supply contract for togas, tunics, and horses in the second century BC (Livy 44.16).

The construction, renovation, and maintenance of public facilities were likely the next-largest type of public provision contract. Public buildings included streets, city walls, temples, markets, *porticus*, basilicas, theatres, facilities for the circus games, aqueducts, and public sewers.[16] Private entrepreneurs were also contracted to erect statues.[17] Like the army supplies, building contracts required vast financial resources. Badian

[12] The 1997 edition of Badian's work (in German) incorporates some newer sources and offers modified interpretations. Older literature includes Kniep (1986); Deloume (1890); and Ürödgi (1968).
[13] Livy, *Ab urbe condita* 5.47.4.
[14] Pliny, *Naturalis historia* 10.26.51.
[15] See for example Livy 23,48,5-49,4; 25,3,10; and 34,6,13 for the year AD 215; 27,10,13 for AD 209; 44,16,4 for AD 169; Valerius Maximus 5,6,8. See on the topic Hill (1952), p. 88f.
[16] Examples can be found in Cicero, sec. in Verr. 1.49.128 (maintenance of temples); Dionysius of Halicarnassus, ant. Rom. 3.67 (maintenance of public sewers); Livy 4.22.7 (construction of the *villa publica*); 5.23.7 (construction of the temple for the Mater Matuta at the Forum Boarium for Iuno Regina on the Aventine hill); 6.32.1 (maintenance of city walls); 24.18.10 (maintenance of temples); 29.37.2 (street repairs; also in 41.27.5); 40.51.3-5 (renovation of markets and theatres).
[17] Cf. Milazzo, Realizzazione delle opere pubbliche, p. 147 ff.

(1983, p. 67 f.) suggests that the building contract for the Marcian aqueduct in the middle of the second century BC amounted to 45m *denarii*, which was roughly the entire fortune of the (purportedly) richest millionaire in Rome in the first century, M. Crassus.

Another famous, though smaller task was coinage. The government entrusted private entrepreneurs even with the minting of Roman coins.

The second group of contracts, the utilization of public property, includes grazing on the public domain (*ager publicus*), mining, and fishing in public lakes.

The most (in-)famous contracts where those outsourcing tax collection, especially poll or land taxes from the provincials. Taxes and dues initially played a minor role in ancient Rome. Like the Greek *polis*, Rome had no concept of direct taxes. The peoples conquered outside of Italy paid tributes, but direct personal taxation such as an income tax was deemed unworthy of free men. The state's primary source of income was war booty. The only tax burden on the Roman citizen was the *tributum*, a tribute demanded irregularly to finance soldiers' pay.[18] It was levied only when military ventures had exhausted the state treasury. Even then it was perceived as a loan of the citizens to the state, to be repaid later out of war booty.[19] With the expansion of Rome, the tribute disappeared almost completely,[20] at the expense of the provinces. A steadier stream of tax revenues was imposed only during the Principate. At that time, however, an official fiscal administration took over and excluded the publicans from the collection of the taxes.

Instead, the collection of indirect taxes and tributes on goods and services became a core activity of the publicans. These dues were imposed primarily on non-Romans and non-Roman goods, namely traders arriving at ports, city gates, and market places. Cicero mentions the three most important taxes that were contracted out in *De imp. Cn. Pomp.* 6.15: the port tax (*portorium*), the "tenth" of the harvest of agricultural products including grain (*decuma*), and the grazing fee (*scriptura*). The inheritance tax (*vicesima hereditatium*) was also contracted out but played a subsidiary role.[21]

All three types of contracts were awarded via auctions (*sub hasta*), similar to licenses or spectrum rights today. Livy 39.44.5-8 mentions public procurement auctions taking place as early as 200 years BC. The auctions appear to have been conducted regularly, with a regular and large audience of entrepreneurs specializing in contracts with the state: Livy 24.18.10-11, refers to businessmen in 214 BC who "frequently participated in

[18] Originally, the tributum probably replaced the self-provisioning during military service; Laum (1926), p. 229.

[19] Even voluntary contributions were repaid wheneve possible. A famous example is the voluntary contributions of Roman citizens during the Second Punic War (in 210 BC). Livy (23.48.5 ff.) reports that, after the financial situation improved in 204 BC, the contributions were ex post recognized as loans and repaid in three installments. See Briscoe (1989), p. 75.

[20] Cicero describes the *tributum* in *De off.* 2.21.74 as an overcome means of public financing.

[21] Cicero complains in his letter *Ad Att*. 2.16.2 that the *vicesima* alone generates too little tax income.

such auctions" (*frequentes qui hastae huius generis adsueverant*). The Roman *censor* (the registrar and "finance minister") awarded utilization or tax-collection rights to the highest bidder, procurement contracts to the lowest bidder. A *societas publicanorum* was represented in the auction by a *manceps*, normally the most illustrious partner (*manceps princeps inter suos* as Cicero formulates in Pro Planc. 13.32 and Ps.-Asc., Caec. div. 33). The auctions took place on the central Roman market place, the *Forum Romanum,* with the exception of a few auctions in the provinces. In De leg. agr. 1.3.7, Cicero writes that the censors can grant tax-collection contracts only in front of the Roman people (*censoribus vectigalia locare nisi in conspectu populi Romani non licet* ), preventing non-competitive allocations to preferred entrepreneurs.

The customary contract term was five years, likely because the censors were originally in office for the period of five years (*lustrum*).[22] The individual contract terms and conditions were laid down in so-called *leges locationum* (or *lex censoria*), a reservoir of fixed contract clauses that, for the most part, could be used for each new contract grant.[23] The contract specified payment schemes, warranties, and legal rights.

The scale of these three types of business activities expanded vastly with the expansion of Rome. While the types of contracts did not change much throughout the Republic, the economic opportunities grew with the addition of new territories. The decline of the Roman Republic and the onset of the Principate, however, brought an end to the success story of the publicans. As discussed in more detail in Section 2.4, the knights (*equites*), and thus many of the publicans, were subject to proscriptions during the last century BC, resulting from power struggles with the senatorial aristocracy.[24] Legal reforms were passed that restricted the business activities of the publicans. First, they became limited to collecting taxes and dues.[25] Then, Augustus transferred the tax collection contracts in Gaul, Asia, and finally in all imperial provinces to a *procurator Augusti*, who was part of his bureaucracy.[26] The Julio-Claudian emperors (AD 14-68) continued to gradually reduce the contracting with private entrepreneurs and, in the 2nd century AD, Trajan (AD 98-117) finally limited it to a few specific taxes such as the inheritance tax. The large-scale operations of the publicans reverted to smaller-sized businesses of so-called *conductores* (contractors), similar to their origins in the early Republic.[27]

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[22] Mommsen StR II, p. 342 f. speculates that, originally, the franchises were granted *quinto quoque anno*, i.e. every four years, and it was only later that this cycle was extended to five years.
[23] An example is the *Lex Portorii Asiae*, see fn. 29.
[24] According to Appian (*Bell. civ.* 4.5), 2000 *equestri* were killed; see also the detailed account of the brutality of the proscriptions in Cassius Dio (47.14). More on this in Ürödgi (1957), col. 1201.
[25] Cimma (1981), p. 99 ff.; Hirschfeld (1963), p. 69 ff.; Rostovtzeff (1902), p. 379 ff.
[26] Marquant (1884), pp. 301-318; Ürödgi (1957), col. 1200, 1202. A province was called imperial if the emperor appointed the governor, and senatorial if the senate appointed the governor.
[27] See Pliny, *Epistulae* 7.14; *Panegyricus* 3.7.7; 39.5.

Concurrent with the demise of the *societas publicanorum*, economic growth slowed down in several industries. One example is the mining industry, which had formerly seen an explosion in output, likely due to technological improvement and its use by the companies of the publicans. As Wilson (2002) reports, the use of the new water-powered mining techniques and the output from various mines shrank significantly in the first century AD, which is after the emperors took over the mines.

The correlation between output and activities of the publicans in other industries is harder to measure. Tax collection by state officials, for example, might have been easier to enforce, even if less efficiently organized. It was also affected by the drastic changes in tax laws mentioned above. The construction industry remained very active, which is not surprising in light of the territorial expansions and the emperors' demand for villas, temples, and palaces. It would be interesting to know whether the cost of production, e.g. for street repairs or army provisions, increased after the demise of the *societas publicanorum*. Unfortunately, such data is hard to procure.

The demise of the *societas publicanorum* also explains why this business format is not discussed much by economic and legal historians. As mentioned above, most of today's knowledge about Roman law stems from the compilation of Roman law under Justinian, the *Corpus Iuris Civilis*, in AD 533-534. The codex contains legal opinions from the classical and post-classical periods (1$^{st}$ to 6$^{th}$ century AD), but not from the pre-classical period. Since it was compiled after the lease-holding companies had disappeared, the jurists cited in the *Corpus Iuris Civilis* refer to the publicans only in the sense of smaller tax collectors. The lack of easily accessible evidence is likely the reason the *societas publicanorum* is relatively unknown in the history of the corporation.[28]

### 2.3 The *Societas Publicanorum* as a Business Corporation

To what extent were the large associations of the publicans "corporations"? From the historical literature and inscriptions,[29] we know that Roman law recognized two types of associations, the *collegium* and the *societas*. The *collegium* was the only incorporated form of organization besides the public corporations (such as the *populus Romanus*, i.e. the state, or the *aerarium* and *fiscus*, i.e. the state and imperial treasuries). It was, however, available only to organizations with "public purpose" such as religious and political asso-

[28] See Malmendier (2002). In addition, most of the scarce evidence about economic activities in ancient Rome comes from the period of the early Empire; see Temin (2006).

[29] We use classical Roman and Greek literature and inscriptions, in particular the *Monumentum Ephesenum*, an inscription discovered in Ephesus in 1976, which turned out to be the translation of a Latin tax law – the *Lex Portorii Asiae* – from AD 62 (Engelmann-Knippe, 1989). The nucleus of this law, paragraphs 1-36, originates in the late Republic, 75 or 74 BC and reveals numerous details about the functioning of the lease-holding companies.

ciations, not including government lease holding.[30] As a result, government leaseholders had to set up their companies as *societates*, the Roman version of partnerships.

The Roman partnership differs from the modern corporation in many ways: Partners (*socii*) could not limit their liability; the partnership could not exist beyond the death or renunciation of a partner nor in case of legal disputes among the partners; and the firm could not assume rights or obligations separately from its members.[31] Hence, the legal format of the *societas* was evidently unsatisfactory for the large-scale and long-term operations of government leaseholders. The Romans resolved this deficiency by reinterpreting and allowing exceptions to the prevailing legal rules, applicable only to lease-holding companies. Four features differentiate the *societas publicanorum* from the simple *societas*:

1. *Representation*: A single person could contractually bind the firm and assume rights in the name of the firm.[32] The representative with whom the *censor* interacted and who bid for contracts in the public auction was called *manceps*, as described above.
2. *Continuity and Stability*: The firm did not cease to exist if a partner died or left the firm. Moreover, legal disputes among the partners did not necessarily affect the existence of the *societas publicanorum*.[33] Even the departure of the key executive, the *manceps*, did not affect the contractual relationship between the company and the Roman government.[34]
3. *External Financing*: Investors could provide capital and acquire shares (*partes*) without becoming a partner and without being liable for the company's obligations. Several ancient authors refer to the shareholders of the *societates publicanorum* as *participes* or *adfines*.[35] We also know that the shares were traded and had fluctuating prices. For instance, Cicero writes about 'shares that had a very high price at that time.'[36] The statement also implies that the shares could be bought either from another shareholder or directly from the company, suggesting secondary offerings. Traders met on the *Forum Romanum*, supposedly near the Temple of Castor.[37]

[30] Duff (1938), pp. 95 ff.
[31] See, for example, Kaser (1980), pp. 225-227.
[32] *Digesta* 3.4.1.1.
[33] The special legal action was called *actio pro socio manente societate*, see *Digesta* 17.2.65.15.
[34] We can infer this from paragraphs 46 and 54 of the *Lex Portorii Asiae*.
[35] E. g. Cicero, *Pro lege Manila* 2.6, *Pro C. Rabiro Postumo* 2.4; Plautus, *Trinummus* 330-331; Livy, *Ab urbe condita* 43.16.2. The meaning of *adfines* is vaguer; they are never mentioned in Cicero's work.
[36] Cicero, *In P. Vatinium testem interrogatio* 12.29. Badian (1983), p. 102, points out that the high stock prices Cicero mentions are consistent with a price reduction for tax collection rights in the same year.
[37] See Plautus, Curculio, 78, and the references in Chancellor (1999), p. 4.

4. *Rights and Obligations*. According to *Digesta* 47.2.31.2 the company of tax collectors could file actions, e.g., against fraud or embezzlement. The company could also own property and inherit items.[38]

The *societas publicanorum* had thus assumed the most important features of the modern corporation. In addition, other sources describe it almost directly as a separate legal entity. For example, Cicero reports about a *societas publicanorum* that "consists of other *societates* [*publicanorum*]",[39] and thus assumes the role of a natural *persona*. Gaius counts the *societas publicanorum* among the organizations with a *corpus* (*Dig.* 3.4.1.1). And *Dig.* 46.1.22 states that the *societas publicanorum* can "act like a person," which is exactly the modern characterization of corporations as legal *persona*.

The modified features of the *societas publicanorum* had a far-reaching effect on its access to capital. Cicero mentions that stock ownership in the *societates publicanorum* was widespread in the Roman population. According to Polybius, "almost every citizen" invested in government leases by the 2nd century BC.[40] A famous statement by Cato indicates that investors aimed for diversified portfolios. Cato advises that, if people wished to obtain money for shipping business, they should form a large association and when the association had 50 members and as many ships, he would take one share in the company.[41] These quotes from Cicero, Polybius and Plutarch illustrate not only the flows and functioning of the Roman capital market, but also that such transactions were a matter of course. Plutarch, for example, quotes Cato with the expectation that his readers in the early Roman Empire would understand his boasting. In other words, educated Romans knew about the possibility of buying shares in the *societates publicanorum*.

In summary, the *societates publicanorum* functioned much like modern corporations in terms of their recognition as legal entities and their access to capital markets. This being said, the *societas publicanorum* does not display every feature of a corporation, at least in the sense of a modern definition of legal *persona*. The concept of the legal *persona* was formed slowly over the centuries. Its modern conceptualization started in the 16th century and was the subject of extensive theoretical debates in the 19th century, most prominently between the "Romanist" legal scholar Friedrich Carl von Savigny and the "Germanist" Otto von Gierke.[42] The modern concept imposes much more structure than

[38] *Digesta* 3.4.1 (*habere res communes*) and *Digesta* 37.1.3.4 (*bonorum possessio*).
[39] Cicero, *Epistulae ad familiares* 13.9.2 ("*constat ex ceteris societatibus*"). Whether this quote truly indicates corporate pyramiding is debated, see Balsdon (1962) for a discussion, esp. p. 136 (esp. fn. 22), for a discussion.
[40] Polybius, *Historiae* 6.17.3-4.
[41] Plutarch, Cato Maior, 21.5-6. We thank an anonymous referee for suggesting this quote.
[42] Von Savigny (1840-49), vol. 2; von Gierke (1887).

existed at the time.[43] The Romans were not concerned with such conceptual debates. Dealing with the rapid transformation of their small closed agricultural economy into an open system that spanned the entire known world, they managed to accommodate the practical needs of their growing economy without revolutionizing laws regulating company formats. From a practical, economic perspective, the historical sources paint a compelling picture of the *societas publicanorum* as the first business corporation.

## 2.4 Why Did the Publicans Disappear?

Why did the development of the Roman business corporation come to a halt, ultimately being reversed under the Roman emperors? Why did the *societas publicanorum* disappear instead of becoming the direct predecessor of the modern corporation? These questions take us to the debate on the political economy of legal, financial, and economic development. We showed above that the rise of the publicans is closely related to the development and functioning of the Roman Republic and that its demise was triggered by the disappearance of the Republic and the rise of the emperors. But, while it seems clear that the rise and fall of the *societas publicanorum* reflects Rome's changing political environment and that their rise was in the interest of political elite in an expanding Roman Republic, it is less clear what motivated the emperors to suppress the activities of the *publicani* and the related financial and economic developments.

Traditionally, historians have linked the demise of the publicans to their abuse of power. Already in the 16th century, the legal historian Cujaz described the publicans as "unsurpassed in fraud, avarice, immodesty and audacity."[44] Over the last four centuries, this verdict has changed little. Deloume and Ürödgi portray the publicans as revenue-hungry exploiters.[45] Mommsen relates the rise of a class of profit-oriented entrepreneurs, i.e., of the publicans, to the emerging social tensions in the Roman Republic and, later, the disintegration of the Roman Empire.[46] Cunningham lists "avarice," "extortions," and "greed" as their main business motivation.[47] These historians interpret the elimination of

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[43] A more detailed discussion of appropriate classification criteria for the ancient corporation is in Malmendier (2002). See also Duff (1971), e.g. on p. 48. A similar problem in the modern law and finance literature is implicit comparisons relative to the standards in one country. For example, some countries may (formally or informally) recognize firms as separate entities even if they are not registered – which is, instead, a legal prerequisite on most Western countries. As a result, data collected on firms and different types of firms in different countries may be biased. For instance, most Latin American countries have no concept of "partnerships" and only limited-liability companies are included in the "formal" sector (Klapper and Quesada Delgado, 2007).

[44] Cujaz (1595) characterizes the *publicani* in his commentary on *De publicanis et vectigalibus et commissis* (*Digesta* 39,4) as: "*Hi quam fraude, avaritia, immodestia, audacia superent ceteros homines nemo est qui nesciat…*" (p.54).

[45] Deloume (1890), p. 475 f.; Ürödgi (1968), col. 1191 f.

[46] Mommsen (1912), vol. II, p. 379 f.

[47] Cunningham (1902), pp. 157 and 165.

the government lease-holding system and its replacement by public administration as an attempt of the emperors to remedy the shortcomings of contracting and outsourcing that relied on monetary incentives. Augustus is hailed for organizing an effective public administration that eliminated the abuses of the publicans.

There are, however, two problems with this traditional view. First, it is unclear how severe the abuses of the publicans were. As Badian (1983) points out, the negative image of the publicans is biased. At times when the system of public contracts was working well, there was little reason for ancient writers to report about it. The excesses and abuses of the publicans, instead, stirred the interest of the ancient historians and led then to a partial treatment of the publicans in the historical literature centuries later.

Second, however grave the abuses were, it is unclear whether the governing political class had any interest in protecting the inhabitants of the provinces from the excesses of the publicans. Attempts to restrain the publicans, such as the legislation of Q. Mucius Scaevola as governor of province Asia in the early first century BC, were rare. Politicians had to overcome resistance among their fellow magistrates in order to enact any such legislation, as Cicero reports in his letter to Atticus (6.1). Quite to the contrary, the proconsuls displayed similarly abusive behavior in the provinces they were governing.[48] Thus, the traditional explanation for the demise of the publicans, which invokes the "benevolent paternalism" of the imperial Roman government, lacks plausibility.

It is certainly right, however, that the political change from Republic to Empire fundamentally changed the political-economy framework in which the publicans conducted their business. First, the government became less dependent on the publicans for purely organizational reasons. During the Republic, the short tenure of the consuls and other magisterial offices precluded a stable bureaucracy that could have been in charge of public works. In other words, it was a necessary condition for the change from private lease-holding to public ("re-nationalized") administration that the emperors established a permanent bureaucratic apparatus.[49] At the same time, creating a bureaucracy also allowed the emperors to divert public funds more easily. Under the Principate as the emperors increasingly re-directed public revenues into their (private) pockets and Rome's public treasury, the *aerarium*, lost its importance.[50] Such diversion was likely easier when the emperors' own employees collected public revenues rather than when the task was publicly auctioned off and performed by private entrepreneurs. In fact, as Badian

[48] See for example, Cary and Scullard (1975), p. 174.
[49] Heuss, 1960, p. 363; Rostovtzeff, 1957, p. 382.
[50] During the Republic, all state finances went through the *aerarium*. It was the role of the two quaestors to manage the *aerarium*, following the decrees of the Senate. During the Principate, the emperors established an additional treasury, the *fiscus*, with whose usage they bypassed Senate. They also started to nominated the quaestors themselves or replaced them with dependent officials. See Cary and Scullard (1975), p. 379.

(1983) points out, earlier during the Republic, Gaius Gracchus started to outsource tax collection in the province of Asia to the publicans in order to *prevent* the governors from diverting public revenues. A reverse argument explains why the emperors wanted to discontinue outsourcing.

Second, the switch from private entrepreneurs to bureaucrats coincided with the gradual increase in taxes under the emperors. As discussed above, taxation was generally viewed as intruding on civil liberty and had caused violent resistance all over the empire.[51] Hence, it is conceivable that enforcement was easier for government employees, i.e., representatives of public sovereignty with public enforcement rights, than for private entrepreneurs. Thus, even if the auction-based outsourcing system had revenue-enhancing features, e.g., identified the lowest bidder for the provisions of services and the highest bidder for revenue rights, these advantages might have been outweighed by the better yield from public collection when taxation increased.

A third reason relates to the tensions between the political and business elites in ancient Rome. The emperors may have had concerns about powerful and large business organizations since the power of the publicans posed a threat to their own imperial position, consistent with arguments in the modern political-economy debate (e. g. Rajan and Zingales, 2003). During the Republic (particularly in times of war) the Roman government repeatedly came to realize its dependence on the services of the publicans. The emperors were in the position to avoid such dependence building up their own bureaucracy.

This latter argument is particularly compelling in light of the increasing political role of the publicans. Early during the Republic, the publicans had shown little interest in political involvement. Becoming a senator and running for political offices would have required them to give up their business, as senators were excluded from trade and commerce.[52] The political involvement of the publicans, however, increased significantly with the Gracchan reform movement. After the murder of his elder brother Tiberius Sempronius Gracchus in AD 133, Gaius Sempronius Gracchus continued to strengthen the position of the *equites*, i.e., the knights, who also ran the *societates publicanorum*. He passed a law (*Lex Iudicaria*) granting them control over the courts that dealt with the senatorial extortions in the provinces. These reforms helped to create an *ordo equester*, i.e., a ‘class’ of knights with a distinct identity. C. Gracchus also reinforced the economic power of the publicans by allowing them to collect the “tenth” (*decuma*) in Asia, Rome’s richest province. (Previously the publicans had only collected small taxes in Asia.) The *equites* and, most prominently among them, the publicans started exerting increasing in-

[51] Laum (1926), p. 218; Meincke (1984), pp. 170-1.
[52] Partly, the apparent lack of political ambition might reflect hidden constraints. While *equites* were formally qualified to enter the Senate, being part of the land-owning aristocracy may have been an informal impediment embedded in social prejudice, as for example argued in Badian (1983).

fluence on state politics – an influence that senators (like Drusus and L. Sulla) and, later, the emperors aimed to undermine.

Finally, another possible reason for the demise of the publicans is lack of credible commitment on the side of the emperors. That is, it might have been impossible to sustain the *societas publicanorum* and the system of government leases even if the emperors had wanted the system to persist. How could the emperors convince entrepreneurs that they would respect property rights and honor obligations towards the publicans? The Roman Republic was a system of checks and balances. But the emperors centralized power and could, in principle, bend law and its enforcement in their favor. Eliminating the large companies was that much easier, given that their status was not enshrined in formal law. Similar accounts of kings and other powerful elites imprisoning or killing their bankers are common throughout history, especially if the elites were knee-deep in debt.

These factors point to the importance of politics, in addition to and sometimes in spite of legal development, for the establishment and longevity of corporations in Rome.

### 2.5 Finance and Growth of Large Firms—With and Without Law

We have shown that the Roman publicans were able to establish large-scale business operations when the governing class supported and, in fact, benefited from those businesses. Laws were reinterpreted to facilitate government lease holding without fundamental legal reforms. With the transition from a Republican to an imperial government, however, the Roman economic system gradually switched from contracting with private entrepreneurs to large-scale nationalization. Since such financial and economic regression occurred at a time when the legal system reached its height of development, the Roman case allows us to distinguish the influence of political changes from that of legal changes.

The historical case provides one example of corporations functioning without the legal environment we usually presume they need (including legal concepts such as limited liability or private corporation), provided that the government is willing to grant their status and operation. The Roman experience highlights two institutional circumstances that were favorable to the development of the business corporation: First, the state needs to be strong enough (or rich) enough to generate demand for complex organizational tasks but weak (or frugal) enough that these tasks must be outsourced. Second, the legal system needs to be accommodative enough to extend existing, sanctioned legal forms to solve new organizational problems.

The historical evidence also illustrates that the growth of business organizations in scale and scope tends to generate tensions between the commercial elites who control them and the political elites who control the state. One aspect is that political (and military) needs to centralize may jeopardize the existence of independent business corporations. Another aspect is that the growth of business corporations can result in control over portions of the economy, leading to significant political influence and control over institutional development – a feedback loop that might result in large and inefficient firms (Morck, Wolfenzon, and Yeung, 2005). One interpretation of the Roman evidence is that the former loop and fear of the latter one explain the demise of the business corporation under the Roman emperors.

Economic historians as well as legal scholars have elaborated on the emergence of financial and economic relationships "even without law" given the right set of institutions (Ellickson, 1991; Greif, 1989). Cull, Davis, Lamoreaux, and Rosenthal (1996), for example, discuss how a wide variety of financial institutions arose across Western Europe and North America to meet the financial needs of small- and medium-size enterprises at times when securities markets and banks focused on financing large enterprises. Temin (2006) points to the growth-promoting qualities of political institutions in Rome, such as granting security to private individuals during the long-lasting *Pax Romana* (27 BC - AD 180). However, the case of the *societas publicanorum* stresses the countervailing force: While it is true that the economic growth of Rome during the late Republic and the early Empire indicates the quality and importance of Roman institutions, it is also true that these institutions persisted only as long as they served the interests of the political elite. They were not stable or resistant enough to protect citizens when political interests reversed.

Interestingly, political and economic interests of the government played a similar role in the later development of the corporation. In the 17th and 18th century, the English East India Company developed from a loose association of merchants, who contributed capital and divided profits one voyage at a time, into a continuous organization.[53] Its incorporation was originally driven by the need to create a body of merchants to which the government could transfer monopolistic trading privileges and which the governmental authority needed to extract economic surplus.[54] As the Company gained in power, it threatened the interests of the British political elite. This conflict led to the centralization of imperial power and expansion of the imperial bureaucracy, the dissolution of the Company, and ultimately the official annexation of the Indian colonies under the crown in the 19th century. By this time, however, the practice of incorporation was established beyond the East India Company and remained in practice in the format of "special incorporation," whereby corporate bodies are created (and dissolved) by explicit acts of the state and provide monopolistic rents to elites in exchange for performing state-like functions. The subsequent rise of democracy in England and the United States led to debates over such elite privileges and the existence of corporations. The function of corporations was again transformed as a result of political conflict, this time in line with the principles

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[53] For a detailed history see, for example, Davis (1973) and Scott (1910-12), vol 2.
[54] Gower (1969), p. 24.

of free entry and competition that inspired the passage of “general incorporation” statutes.

Other examples throughout more recent history provide evidence of the broader point that the state can be critical in fostering economic development, even without systematic changes in legal environment. One example is Mexico’s development in the nineteenth century. Historians have related the lack of economic growth in the first half of the nineteenth century to Mexico’s political instability and inefficient institutions and the resumption of growth in the second half of the century to the political changes, including of political elite’s evolving interest in developing a stable economy, as is evident from the government’s active support of railroad construction (Cardenas, 1997) and banking system development in the 1880’s (Marichal, 1997).

Even more recent parallels can be found in East Asia, where changes in political interest have affected economic performance without changes in legal framework. One example are the political and social reforms in China during the Great Leap Forward, Mao’s attempt to modernize China’s agriculture and industries (1958-1960), and the Cultural Revolution, Mao’s political campaign to revolutionize Chinese society and eliminate his political rivals (1966-1976). These changes in political interest weakened many central institutions and shifted economic power to local governments.[55] With political support – but without legal reforms – China moved closer to a market economy by decollectivizing agriculture, encouraging private enterprise, and allowing profit sharing in state factories. Later, political elites even pushed for the creation of new forms of business that were exempt from the usual legal restrictions in order to attract foreign investment. On the legal side, however, there were few attempts to establish the type of legal environment that is typically considered central to economic progress, such as secure private-property rights, commercial law (including property and contract law), or an independent court system for adjudication (Montinola, Qian, and Weingast, 1996).

A similar example is Korea. Korea’s transformation from depending heavily on foreign aid in 1960 to growing at a rate of over 9 percent between 1965 and 1979 is generally attributed to changes in political economy.[56] Starting in 1962, the Korean government pursued a sequence of aggressive five-year economic development plans, fostering the chemical, steel, and machine industries as well as export-oriented growth. Throughout the 1970s, the scope of governmental intervention expanded, evolving into a government-directed system of economic order.[57] Democratization and the establishment of a free market economy, however, occurred only in the 1980s. The 2008 World Bank business

[55] Shirk (1993)
[56] Collins (1990)
[57] Cho (1989)

survey of countries' legal environments ranks Korea's investor protection 66th out of 181 countries (China is 84th).[58] This evidence is consistent with the view that political and economic relationships are able to develop despite a dearth in parallel legal developments.[59]

## 3 Determinants of Financial Development and Growth

The rise and fall of the *societas publicanorum* provides a unique setting in which legal and political influences on financial development and growth can be disentangled. In this section, we discuss how this case informs the current debate about finance, growth, law and politics.

### 3.1 The Link Between Financial Development and Growth

The underpinning of this debate about legal and political determinants of financial development and growth is the link between finance and growth. While there is little doubt about the positive correlation between finance and growth (see, e.g., Levine and Zervos, 1998), the question is: Does financial development *cause* economic growth? This question is particularly relevant to the "law versus politics" debate since the legal environment has been found to predict various measures of financial outcomes, but less consistently measures of economic growth. The literature uses several methodologies to establish a causal link: simple *post hoc ergo propter hoc* arguments (King and Levine, 1993), the analysis of regulatory changes that affect financial development but not growth (Jayaratne and Strahan, 1996), horse races between alternative explanations (Beck and Levine, 2002), and firm-level analyses (Demirgüç-Kunt and Maximovic, 1998). Each of these approaches is open to obvious endogeneity concerns and alternative explanations so that additional evidence remains valuable.

In the Roman case, financial development and the rise and fall of the Roman shareholder company coincide with the increasing and then decreasing production in some of the *publicani*'s industries. This correlation does not provide evidence of a causal link. We do observe, however, a practical need for advanced contracting and financial development in order to realize the growth opportunities in the expanding Republic: Without a quasi-corporate organizational form such as the *societas publicanorum* and its improved access to external financing (via traded shares) it would have been hard to undertake large-scale projects such as the construction of streets, public buildings, or tax collection. Financial development appears to have been a precondition for growth.

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[58] World Bank Doing Business Survey; CIA World Factbook.
[59] Ginsburg (2000).

The Roman case study also contributes to the debate about the specific channels through which advances in financial contracting can foster productivity. The current literature suggests that financial development leads to growth by channeling financing to growing rather than declining industries (e.g., Wurgler, 2000), to small firms (e.g., Beck, Demirgüç-Kunt and Maksimovic, 2005) and to firms in high need of external financing (see, e.g., Rajan and Zingales, 1998).[60] Here, too, it has been difficult to address endogeneity concerns and to distinguish the proposed channels from correlated determinants.[61] Consider, for example, Rajan and Zingales' (1998) argument for the channel of external financing. They show that sectors in greater need of external finance develop faster in countries with more developed financial markets. "Need of external finance" is calculated as the fraction of capital expenditures not financed internally in the median firm in the corresponding U.S. industry. The analysis is open to the interpretation that sectors with large external financing (in the U.S.) are drivers of economic growth for other reasons; for example, they might be the sectors with the smallest inherent moral hazard problems.

The Roman case study provides an additional piece of evidence for the channel of external financing. The calculations in Section 2.2 indicate the extraordinary magnitude of financing required for the Roman public lease projects. The *societas publicanorum* could issue *partes* (shares) and thus have access to a much larger pool of external financing. Moreover, investors could move their money more easily between different companies, and such investments became wide-spread, as Polybius reports.[62]

### 3.2 The Determinants of Financial Development

The link between finance and growth raises the question of what, in turn, determines financial development. In our analysis of the *societas publicanorum*, the flexibility of Rome's legal system emerges as one important factor in the development of advanced financial contracting arrangements. A second major influence was the interests of the political elites during the Roman Republic and Empire. Much of the current literature revolves exactly around these two determinants: law and politics.

We briefly review the current debate in the literature, emphasizing questions which the historical Roman evidence speaks to. Excellent surveys of the broader literature are, for example, provided by Levine (2005) and Beck and Levine (2005).

[60] A relate literature in macroeconomics also identifies access to external finance as a determinant of long-term growth (e.g., Barro, 1997; Aghion, Howitt, and Mayer-Foulkes, 2005; Bencivenga and Smith, 1993).
[61] Koren and Tenreyro (2008) propose technological diversification as an alternative link.
[62] See fn. 40.

### 3.2.1 Law and Finance

Starting with the seminal papers by La Porta et al. (1997) and (1998), researchers have related financial and economic development to the legal environment of a country. The causal effect of the legal environment, however, is difficult to establish since legal institutions arise endogenously. For example, if a country makes a political choice in favor of banks and then adopts laws that strengthen banks' position as creditors, the resulting correlation between creditor protection and legal environment simply reflects a political choice. La Porta et al. argue that relating financial outcomes to "legal systems" rather than to current laws ameliorates the causality problem. "Legal system" serves as an instrument to isolate the independent effect of legal rules on investor protection since countries have not "chosen" a legal system or, to the extent they have, did not do so on the basis of modern-day investor protection.

La Porta et al. (1998) distinguish four legal systems: British common law, French civil law, German civil law, and Scandinavian civil law.[63] They relate these legal traditions to a core aspect of financial development: investor protection. If the rights of investors are not protected, managers can divert returns into their own pockets, and investors will be unwilling to finance investments in the first place. The authors find higher shareholder protection in common-law than in French civil-law countries. For example, in common law countries, proxy voting by mail is more common, minority shareholders can more easily challenge major management decisions such as mergers, and lower share capital is required to call an extraordinary meeting. The difference in creditor protection is directionally similar, though not as pronounced.

La Porta et al (1997) take this evidence one step further and argue that countries with better investor protections have more highly valued and broader capital markets and therefore easier access to external finance. They estimate a 30 percentage point decrease in the ratio of "external capital" (stock market capitalization held by outside shareholders) to GNP associated with a change from common law to any type of civil law, though the effect is insignificant and smaller for some of the control variables used for shareholder protection. The authors also estimate that French civil law is associated with a 12 percentage point lower Debt/GNP ratio than common law. Overall, civil law systems and French civil law, in particular, emerge as most detrimental to financial development.[64]

[63] The authors consider only countries with at least five domestic, non-financial, publicly traded firms with no government ownership (no socialist or transition countries): 21 countries with French civil law tradition, 6 with German civil law tradition, 4 with Scandinavian civil law tradition, and 18 common-law countries.

[64] Follow-up research relates investor protection and private property rights to firm valuation (La Porta et al. 2002; Caprio, Laeven, and Levine, 2003), dividends (La Porta et al., 2000), and reinvestment of earnings (Johnson, McMillan, and Woodruff, 2002). Levine (1998, 1999, 2003) and Beck, Levine, and Loayza (2000a, b) link legal-origin induced investor protection to development of stock markets and financial intermediation.

The Roman evidence presented in this paper cannot contribute to cross-country comparisons of legal systems. But it does speak to the specific channels through which a civil-law system may affect economic outcomes. Two prominent channels, discussed in Beck, Demirgüç-Kunt, and Levine (2003a) and Beck and Levine (2005), are "political structure" and "adaptability." The political-structure argument holds that civil-law countries accord excessive power to the state and constrain property rights. These countries are less likely than common-law countries to maintain politically independent judiciaries, to grant courts jurisdiction in cases involving executive or legislative power, and to extend to courts the power of constitutional review. The adaptability argument holds that the common-law reliance on judicial discretion and case law has allowed it to adapt more easily to changing commercial and financial needs. Judges are better at adapting to new circumstances because they are more objective than legislators and are shielded from political pressure. The adaptability view also points to the common law's eschewal of rigid guidelines for the presentation of evidence and communication between parties that can otherwise hamper the judicial process. By contrast, civil-law systems have evinced, at least from the time of Napoleon, a mistrust of judges and have tied their hands with formalistic statutes and procedures that cannot easily be adapted to changing needs.

On the surface, the Roman evidence may appear to be consistent with the political-structure argument. When the political elites of Republican Rome aimed to foster the entrepreneurship of the *publicani*, legal rules were interpreted in a flexible way so that the *publicani* could access broad financing. Conversely, when the political elites of the Roman Empire aimed to reverse this development, the *publicani* did not benefit from the legal environment any more. But it is not the case that the emperor interfered with judiciaries or the interpretation of law. To the contrary, Roman civil law, especially (and famously) contract law, evolved into a sophisticated and nuanced, yet practically more viable and less formalistic set of rules under the emperors, who did not interfere with the development of legal opinions (Kaser, 1980). Hence, the Roman evidence confirms the role of political influences on economic development, but not via legal development or the lack of politically independent judiciaries.

The Roman case also provides a counter-example to the common-law/adaptability link. It was precisely the adaptability of Roman civil law that allowed the *publicani* to flourish. Legal rules on the Roman partnership (*societas)* were adapted to meet the economic demands of the growing empire and its need for larger companies with greater access to external financing. Hence, the adaptability mechanism to which the growth-friendliness of *common* law systems is attributed was at work also "at the origin" of civil law.

Of course, civil law "at its (Roman) origin" is different from French or German legal origin in its later incarnations. French civil law assumed its more rigid nature with the codification under Napoleon (Beck, Demirgüç-Kunt, and Levine, 2003a), and one may presume that the same is true for Roman law and the codification under Justinian. That is, one may suspect that, while the Roman law was flexible pre-Justinian, it changed its nature after being codified at the beginning of the sixth century AD. This is, however, not the case. The core piece of the *Corpus Iuris Civilis*, the *Digesta*, presents long discussions of the legal opinions of various jurists, who do not always agree. These discussions typically revolve around case variations that reflect changing commercial circumstances. The discussion of the Roman partnership (*societas*) in the 17th book illustrates precisely this nature of legal evolution. The jurist Pomponius points out that a partnership dissolves if one of the partners dies, with the exception of the *societas vectigalium*, i.e., the type of *societas publicanorum* occupied with tax collection that survived into the Principate.[65] Pomponius then discusses whether this exception applies if the deceased partner founded the business or otherwise played a “core role” in running it.[66] The fact that Pomponius questions the applicability of more relaxed partnership rules in this case illustrates that the adaptation of Roman law was driven by the practical demands of large-scale businesses that were distinct from the involvement of individual “partners.” Where this characterization did not apply, as it became more common among the smaller *societates publicanorum* under the Principate, the adapted legal rules did not apply either. This discussion exemplifies how the *Corpus Iuris Civilis* preserved the case-based and adaptable nature of legal rules. Thus, the Roman evidence suggests caution in characterizing civil-law systems as less adaptable to changing circumstances, with or without codification.

This insight resonates with the findings in other historical cases. Comparative historical studies have highlighted that civil-law institutions have better served the organizational needs of an evolving commercial society than common-law institutions at various points in history. Lamoreaux and Rosenthal (2005), for example, argue that French law has historically allowed more flexible forms of liability and ownership than the U.S. common law. Before 1867, businesses in France could not form limited-liability corporations. However, they could form a *société en commandite*, which consisted of general partners, who managed the firm and had unlimited liability for its obligations, and special partners, whose liability was limited to their investments and who had no managerial role. These organizations issued shares as well. The authors argue that the *commandite* provided a sufficient substitute for the corporation. In the mid-19th century, when stock quotations were only available for a few firms in New York and around fifty in Boston, over 200 firms were traded in Paris. No such flexible partnership arrangements were

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[65] Dig. 17.2.59 *pr*.: *Adeo morte socii solvitur societas … in societate vectigalium nihilo minus manet societas et post mortem alicuius, …*

[66] Later in Dig. 17.2.59 pr.: *quid enim, si is mortuus sit, propter cuius operam maxime societas coita sit aut sine quo societas administrari non possit?*

available in the United States. New York's 1822 enable statute for the *commandite* required partners to declare the amount of their individual investments, precluding the trade of shares, and courts often interpreted these arrangements as exposing limited partners to unlimited liability. Unlike American law, French law also allowed ordinary partnerships to alter the terms of partners' liability and managerial authority through contract. The lack of flexibility in American corporate law was particularly onerous to minority shareholders, who could neither force dissolution of the company nor exit easily by selling their shares. Reliable protection for outside investors arrived only with the creation of the Securities and Exchange Commission in the 1930s. The authors conclude that the opposition of a flexible, judge-led common law tradition to an ossified, code-besotted civil law does not stand up to historical scrutiny. While it may characterize the legal environments today, it did not do so at previous points in history, which casts doubt on the perceived fundamental differences between the two legal systems.

The work by Lamoreaux and Rosenthal also emphasizes an aspect of the legal environment that has received less attention in the law and finance literature but is central to our Roman-law analysis: company law and, in particular, the role of "company formats". Does it matter whether firms can incorporate? Does the company format affect access to external finance? External financing is likely to be easier if the liability of investors for company debt can be limited and if the company's existence does not depend on the presence of its members (partners).

To date there is little empirical evidence analyzing the role of legal and organizational formats. Ayyagari, DemirgüçKunt, and Maksimovic (*forthcoming*) provide suggestive evidence from the 1999 World Business Environment Survey that firm-level characteristics, such as legal organization and ownership structure, affect property rights protection as much as institutional factors, such as the legal system. More attention has been paid to the role of limited liability in a number of historical studies. Analyzing the introduction of limited liability in California in 1931, Weinstein (2003) finds little impact on corporations or shareholders. There is no evidence of any surge in the number of firms changing their names to take advantage of limited liability status (as required under the statute) and no dramatic increase in the number of corporations filing income tax returns or in the share values of California's seven NYSE-listed firms after the change.[67]

In contrast, Forbes (1986) argues that the introduction of limited liability in Massachusetts in 1830 had economic benefits. He plots the ratio of incorporations in Massachusetts to those in New York against time (1811-42), where the incorporations in New

[67] In a related paper (Weinstein, 2005), the author also analyzes the position of interest groups (California Bankers Association, California State Bar Committee, San Francisco Association of Credit Men) and is unable to find strong support for or opposition against the change.

York are meant to capture time-variant influences on incorporations in Massachusetts other than the introduction of limited liability. The ratio increases after 1829 (though it plunges after 1839 and shows wide fluctuations before and after). The author estimates a modest $8,290-a-year increase in investment as a result of limited liability. Naturally, the mere time-series identification, based on a single event, leaves ample room for alternative explanations, including other simultaneous legal changes and economic development. Forbes interprets these results as indicating the value of limited liability as a legal innovation. In his conclusions, he speculates why limited liability might have arisen late in England (in 1855), though it was the earliest country to industrialize. The author suggests that large incumbent firms opposed the introduction of limited liability as a means of deterring future entrants, especially in the shipping, cotton, woolens, iron, and steel industries, which were all key sectors in the early part of the Industrial Revolution.[68]

In comparison, the example of the Roman corporation draws a more nuanced picture of the role of limited liability and other legal features. On the one hand, it supports the view that it does not matter whether company laws formally allow for private corporations. Roman businessmen achieved a corporation-type organization in practice, even without the formal legal implementation. On the other hand, it *does* matter whether quasi-corporations were enforced in practice. In the Roman case, large businesses withered when government interests opposed them and prevented their corporate organization.[69]

The Roman evidence also suggests that company features other than limited liability are equally important, such as the ability of the firm to exist independently of specific "partners" or its ability to carry legal right and obligations. Without those it would be hard to issue and trade shares and to involve larger fractions of the population in the financing of these companies. Hansmann, Kraakman, and Squire (2006) emphasize precisely this point. The authors argue that, rather than limited liability, which protects an investor against claims of the company's creditors, protection of the *company* against creditors of the *owners* have been the crucial step in the legal development of the firm.

[68] An alternative interpretation (e.g. Harris, 2000) is that the delayed arrival of limited liability reflects political tensions between the landed gentry and the rising merchant and manufacturing classes. The aristocratic judges showed little interest in fostering the economic development of the nouveau riche. Thus, the Lord Chancellor in the 1830's held that it was the Crown's prerogative to grant limited liability. Both interpretations agree in their emphasis on the instrumentalization of and opposition against limited liability.

[69] The importance of enforcement is more general. As Easterbrook and Fischel (1991) argue, the explanatory power of legal rules is limited if firms can opt out of the default regulation. From this point of view, it is puzzling that legal rules have *any* significant impact on economic outcomes. Gennaioli (2006), however, points out that "opting out" is a true option only if the alternative private contracts are permitted and enforced by courts. He develops a model illustrating the role of the "contractual channel" via which law can affect economic development.

The above concerns about the adaptability of legal systems and role of legal institutions such as limited liability relates to a broader debate about the classification of legal systems in the law-and-finance literature. For example, are South Africa and Israel really common-law countries despite the significant civil-law elements in their laws? More broadly, do the four legal systems significantly distinguish different legal environments?

In using this four-part classification scheme, La Porta et al. refer to the classification of commercial legal systems in David and Brierley (1985), a division also utilized by Merryman (1985). However, David and Brierley propose a tripartite division of Western law into Romano-Germanic, common-law, and socialist families, with Romano-Germanic including Latin, Germanic, Scandinavian, Latin American, etc. Merryman classifies French and German law as two of many subclasses of civil law.[70] Similarly, Dawson (1960)'s often cited history of the transformation from lay to professional judges in England, France, and Germany treats these countries as regions with distinct histories and institutions but does not suggest that they are exhaustive typologies of legal systems. Thus, the fourfold typology in the law-and-finance literature does exist in prior legal literature, but is by no means universally accepted.

The Roman case illustrates one reason why it is hard to identify groups of legal systems with distinct features. Legal systems are in flux and their character changes over time. How can the "origin" cement the character of a modern legal system if the character of the origin itself changed over time from adaptable and case-based to non-adaptable? The case-based evolution of Roman law, in particular, casts doubts on a sharp distinction between Roman and other legal origins. The more rigid character of codified legal systems seems to be the result of later developments, not present at "its origin."

Another, deeper classification concern is that legal origin is not causally relevant for financial development. Omitted variable candidates abound. For example, common law is perfectly correlated with England as the colonizing power and with the Anglican Communion as the dominant Protestant denomination. Beck and Levine (2005) show that the relationship of legal origins to financial development is robust to controlling for many candidate explanations, such as religion, competitiveness of the election process, national openness, and resource endowments. Berkowitz et al. (2003) argue, however, that legal origin matters little in comparison to a country's receptiveness to the legal system at the time it was introduced. They distinguish between "origin countries" like England and France, in which legal systems developed organically over time, "receptive transplants" such as Japan, which selectively borrowed from foreign systems while preserving the

[70] According to Merryman, French law and German law are rather unrepresentative of the civil law tradition – in the case of France because of its revolutionary roots, and in the case of Germany because of the large influence German scholars exerted on their jurisprudence.

characteristics of their own systems, and "unreceptive transplants," in which foreign legal codes were adopted wholesale and without the support of domestic constituencies.[71]

The Roman evidence points to one other alternative explanation, political influences, to which we devote the next Subsection.

### 3.2.2 Politics and Finance

The more recent strand of literature on "politics and finance" re-evaluates the role of legal relative to political institutions. One part of this literature argues that legal and economic institutions are endogenous to the political environment. According to this view, political elites produce institutional outcomes, including the legal system, which then affect economic outcomes. Another part of the literature takes the role of politics one step further and proposes that politics directly determines long-term growth – with or without law.

The first type of "politics and finance" literature does not necessarily refute that the legal environment has a causal impact on finance and growth. It merely points out that the finance- and growth-friendliness of a legal system depends on the interest of the political elites. For example, Rajan and Zingales (2003) argue, in the spirit of North (1981), that, if the interests of the elites coincide with financial and economic development, they will implement legal and other institutions that foster development. If their interests and desire to cement their political power demand institutions that are unfavorable to growth, they will implement those. The authors observe that civil-law countries such as Belgium, France, Germany and Sweden had more developed financial systems than common-law countries such as the United States prior to 1913, but when financial development slowed after 1913, the decline was stronger in the civil-law countries. The authors argue that these empirical patterns correlate with the industrial and financial elites opposing open access to financing and, hence, financial liberalization.[72]

Related papers investigate the role of relevant stakeholders and their political weight in the context of investor protection. Roe (1994) details how competing political groups have, through history, cumulatively determined the present form of American corporate governance. Pagano and Volpin (2006), point out that good shareholder protection triggers stock market participation of a broader portion of voters, who then favor

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[71] The distinction between origin countries and transplants helps, on the other hand, to address the concern that a time-invariant instrument like legal origin cannot explain the historical evolution of financial systems – but if legal institutions and legal origin are to be reliable predictors of financial development then they ought to be such a predictor not only today but throughout history. Distinguishing between "origin" and "transplant" and by receptiveness, all of which can vary over time, legal systems are better able to explain economic outcomes (Glaeser and Shleifer, 2002).

[72] Sylla (2006) questions the empirical methodology in Rajan and Zingales (2003). For example, the claim of a "great reversal" of financial development in the US relative to other countries from pre-1913 to post-1913 is based on calculations that do not account for bond markets in the US but do so for other countries.

even more shareholder protection. Perotti and van Thadden (2006) focus on the identity of the majority shareholder. For example, if the financial participation of the middle class is low, the median voter will choose low investor protection and favor bank or family control. If, instead, middle-class participation is high, the median voter will choose equity control and investor protection. According to Pagano and Volpin (2001), similar dynamics are at play in a variety of policy arenas, including corporate control, public ownership of enterprise, bankruptcy, and securities market regulation. Haber et al. (2003) use the case of Mexico from 1876-1929 to explain how economic systems can remain stable in spite of considerable political instability when governments selectively enforce property rights for those property holders who are integrated into the political system.

The second strand of this literature takes the role of politics one step further. Rather than analyzing the interaction of politics and law, this research asks whether politics determines financial development and long-term growth directly – with or without law. A starting point is the research by Engerman and Sokoloff (1997, 2002). The authors identify the tendency to maintain initial conditions of wealth and political power as a key determinant of cross-country differences in economic growth between North America and other New World economies. They argue that colonies in which initial endowments, climate, and soil conditions favored the farming of crops that were most efficiently produced on large farms (such as sugar, coffee, or tobacco) evolved into an unequal distribution of endowments between a small elite that was rich and politically powerful and a large population of poor workers and slaves without political say. Colonies in which climate and soil favored, instead, mixed farming and provided for little economies of scale evolved into societies with more equality. Acemoglu, Johnson, Robinson (2001) further this argument by using an empirical link between European settler mortality, employed as an instrument for current political inequality in institutions, and economic growth. An even starker example of the direct role of politics is Roe's (2006) analysis of military invasions in the twentieth century. Roe points out that the winners in military conflicts during the past century overwhelmingly had common-law legal systems, but that their financial development may reflect their military success (or lack of war devastation) rather than their legal origin.

Even more directly, Acemoglu and Johnson (2005) question how central legal institutions are to the economic and financial development of a country compared to political institutions. They argue that a weak legal environment (weak protection of contractual rights) can be remedied in private agreements and via reputation, but weak political institutions (weak property protections) cannot. Empirically, they relate various measures of financial and economic development to indices of political and legal institutions. They instrument for political institutions using settler mortality and population density. The basic argument for the first instrument is that, in areas with high initial mortality, colonial powers established extractive political institutions to expropriate wealth from their colonies, while in areas with low mortality they created settlements with greater property protection.[73] The logic of the second instrument, population density at the time of colonization, is that, in more densely settled societies, colonizers set up institutions to extract resources through slave or bonded labor.[74] The instrument for legal institutions is legal origin, based on the argument in La Porta et al. (1997, 1998) that common-law systems provide more robust contract protections than civil-law systems. The authors argue that this classification is particularly appropriate in the context of colonies since colonized countries neither chose their colonizer nor chose to retain their colonizer's legal system because of its contract law. (A caveat is the potential lack of receptiveness in colonies, as discussed above.) The authors find that, after controlling for political institutions (constraints on the executive, protection against government expropriation, private property protection), none of the proxies for legal institutions (legal formalism, procedural complexity, and the number of procedures necessary to resolve a court case of unpaid commercial debt) predict growth. The coefficient estimate on the political-institutions variable "executive constraint," instead, is significant and large: a one-standard deviation increase in executive constraint doubles GDP. The authors conclude that legal institutions do not have a big impact when they are not backed by political power. And, vice versa, even dysfunctional legal institutions suffice to support economic and financial growth as long as political institutions provide security against expropriation by elites and government.

Beck, Demirgüç-Kunt, and Levine (2003b) undertake a similar horse race between legal and political institutions. They relate cross-country differences in financial systems to law and politics, using French Legal Origin of the colonizer and Setter Mortality as the main independent variables and various measures of financial development as

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[73] In Acemoglu, Johnson, Robinson (2001), the authors check the validity of settler mortality as an instrument for contemporary institutions. They show the robustness of their results to the inclusion of a large range of proxies for other determinants of contemporary per-capita income that might be correlated with settler mortality in particular geographic and climatic factors (as traditionally suggested, e.g., by Diamond, Sachs, Montesquieu).

[74] Here, some further investigation whether or not the instrument is uncorrelated with determinants of per capita income like disease would be valuable, especially in light of Jared Diamond's (1997) thesis on the link between the early development of populations and the transmission of human disease: hunter-gatherer populations were typically less dense and had less proximity to animals than settled agricultural societies. As a result, they did not develop immunities to human diseases transmitted from domesticated animals—like measles and smallpox—and were virtually exterminated by such diseases after encountering Europeans. Diamond's argument suggests that the transmission of diseases strongly affected the development of different societies. Some of the robustness checks in the related Acemoglu et al. (2002) paper indirectly address this concern (e.g. dropping the Americas, where the arrival of Europeans after prompted a dramatic demographic collapse or excluding populations with extremely low population in 1500).

outcome variables, controlling for a wide range of other possible determinants such as continent (Latin America and Africa), main religion (Catholicism, Islam, or Other), the percentage of years since 1776 that a country has been independent, and ethnic fractionalization (the probability that two randomly selected individuals in a country will not speak the same language). Similarly to the findings in Acemoglu et al., legal origin typically does not predict private credit or stock market development after including the controls.

Overall, our example of the Roman corporation illustrates precisely the view put forward in this second strand of literature: politics can determine financial and economic outcomes, regardless of the state of the legal development. We observe advanced financial contracting at a time when Roman private law was little developed. And we observe regress at a time when the legal development reaches its height but political interest reverses. Moreover, the Roman case shows that the effect of the political environment does not need to work through changes in the law, i.e., the mechanism suggested in the first strand of the literature. Roman Private Law appears to have followed an independent path of increasing legal sophistication and reduction in transaction costs of legal dealings. A precondition for politics to have a direct impact, irrespective of the formal changes in law, was the flexibility of Roman law discussed above: Roman law as practiced adapted to a changing economic environment without the need for formal legal reform.

## 4 Conclusions

The ongoing debate about the determinants of finance and growth focuses on two main candidates: law and politics. The evidence about the rise and fall of the Roman shareholder company provides historical support for the view that political institutions can dominate the role of other institutions. The right set of political interests allowed a type of shareholder company, *societas publicanorum*, to flourish under the Republic, even though the legal environment was not (yet) sophisticated enough to allow for the concept of a private corporation. And, conversely, when the Roman legal system reached its height in the classical period, but government interests changed, the *societas publicanorum* vanished.

At the same time, the evolution of such a sophisticated business format in an ancient economy may never have been possible without Rome's advanced legal environment. And, vice versa, it is possible the decline in financial contracting and economic scope of markets during the Roman Empire would not have been observed in a different legal environment. A legal environment similar to a modern common-law system might have provided better protection against the State, consistent with the view that civil-law systems are weaker in their protection of property rights. In other words, a horse race between the two determinants is unlikely to be a useful exercise. Today as in ancient Rome, legal determinants cannot be separated from the political environment and the political developments are preconditioned by the legal framework. The Roman case as well as the recent politics-and-finance literature *do* clarify, however, that politics cannot be left out of the analysis.

A second insight regards the modern-day empirical proxies for the legal environment. The Roman-law analysis implies that relevant legal determinants are not captured in formally coded law or even the non-codified law that is enforced in the courts. In practice, economic agents may find ways to accommodate their practical needs, such as better access to external financing or limited liability, even if the recognized law appears to stand in the way. Thus, when trying to measure the transaction costs that an institutional environment (including its laws) imposes on economic transactions, it is most sensible to investigate how a specific demand (e.g. for equity financing) is solved in practice – akin in spirit to the law and finance approach of asking lawyers how a legal problem is solved in practice. A number of historical papers on limited liability and corporations point in this direction. It would be desirable to see attempts to quantify such effects today.

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