Explanatory Note

The following document contains chapters 1, 3, 4, and 5 from the preliminary draft of my book manuscript that is tentatively titled *The Rise of Political Representation and The Problem of Public Credit in Europe, 1250-1750.* Chapter 1 provides an overview of the book's central argument and the evidence that I present to support it. Chapters 3 and 4 then provide more specific evidence on the evolution of public credit and its possible links with the emergence of representative assemblies in a broad set of European states over this five hundred year period. Chapter 5 provides a series of econometric tests. I would be happy to send a complete draft of the manuscript to those who may be interested but thought it best not to burden audience members by sending an even longer text.

The Rise of Political Representation and The Problem of Public Credit in Europe, 1250-1750

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1 Introduction

It has become common to attribute the rise of the European economy to political institutions. One long-standing theme stressed by many scholars in this tradition is that within medieval and early modern Europe, countries with strong representative political institutions tended to experience more rapid commercialization and economic growth, thanks to increased commitment to property rights.[1] This potential lesson from European historical experience has broad implications, and it has been used to inform debates about the beneficially constraining effects of democratic institutions in other locations at other times. However, some have sharply criticized this view, arguing that institutionalist scholars have failed to provide the sort of empirical evidence necessary to demonstrate their case.[2] As part of this debate about institutions and commitment, the idea that representative institutions may promote commitment to repay public debt has gained particular attention. The experiences of states like England, Holland, or Venice seem to support the idea that the development of public credit and representative government went hand in hand.[3] Public credit is a more narrow outcome than overall economic development, but a focus on the former outcome has significant advantages, precisely because this is a more specific question. We can construct a theoretical model of how representation might emerge, why it might matter for public credit, and then confront the predictions of the model with historical evidence on actual institutions. As such, a specific study of public credit may nonetheless contribute to broader debates about the causes and consequences of political representation.

[1] Several major contributions to this literature include North and Thomas (1973), North and Weingast (1989), Delong and Shleifer (1993), and Acemoglu, Johnson, and Robinson (2005).

[2] See in particular Clark (1996, 2007a, 2007b)

[3] See in particular the contribution by North and Weingast (1989) on this subject. Their conclusions have been challenged, however, by scholars like Sussman and Yafeh (2006) and Epstein (2000). Downing (1992) argues that in many European states representative assemblies actually posed an obstacle to raising war finance.

In this book I use historical evidence from a series of European states over a time span of five centuries to ask whether political representation is best seen as an institution that generated commitment, thus leading to the development of public credit, or, alternatively, whether both political representation and public credit are better described as outcomes that depended on common underlying conditions. I will argue in favor of the latter interpretation. The motivation for this study is that even if few if any states in Europe between 1250 and 1750 can be described as democratic, a very large percentage of these states actually had representative assemblies. These assemblies exhibited fascinating variation in their powers and prerogatives, and many of them evolved over time. European states also varied tremendously in size from small city-states like Cologne or Siena to large territorial entities like France or Castile. In short, there is an important opportunity for investigating the economic consequences of representative institutions and to go beyond the most familiar historical cases that have received the lion's share of attention in debates about institutions and commitment. In so doing I also hope to contribute to the existing literature on state development in Europe, as well as to broader discussions about representation.[4] Though I make no claim that my conclusions can be mechanically applied to draw broad lessons about democracy in other places at other times, they can nonetheless inform debates on this subject.

In this study I will use newly collected data on access to public credit by 31 European states over a period of five centuries as well as new systematic data on the presence and prerogatives of representative assemblies in the same set of European states. The systematic data that I have compiled make clear that city-states in Europe enjoyed a consistent advantage over larger territorial states in gaining access to credit. The key question is why this was the case, whether this had anything to do with representative institutions,

[4]Recent important contributions to the literature on state development would include Tilly (1990), Downing (1992) and Ertman (1997).

and if so what causal interpretation to attach to this observation.

I will argue that one reason city-states had this financial advantage was that their active representative assemblies served as a mechanism by which creditors could monitor and influence state financial decisions. With this mechanism, creditors were more willing to lend, and they did so at lower rates of interest. More fundamentally, however, I suggest that representative institutions in city-states took this form because of two underlying factors. First, city states were small, which facilitated frequent gatherings of representatives. Second, the mercantile groups that made up the political elite within city-states had both an ability and an incentive to invest in public debt. They held liquid wealth that could be invested in debt, and it has been argued that after establishing themselves in commerce, merchants had an incentive to diversify their asset holdings by purchasing public annuities that would provide a regular stream of income.[5] In making this argument I am not suggesting that dominance of bourgeois interests necessarily led to democracy. In fact, one important lesson of this book is that those city-state governments which had the most favorable access to credit also tended to be those that were the most oligarchical in form. In other words, rather than having governments where rulers hands were tied, the most successful city-states often had unconstrained executives.

In strong contrast with European city-states, one might conclude that when many territorial states like France, Austria, or the Kingdom of Naples sought to create a public debt, they had to do so in spite of their representative assemblies. These bodies could sometimes prove very powerful, particularly when it came to refusing new taxes, but they tended to meet infrequently which weakened their ability to monitor financial decisions. They also often lacked strong prerogatives in the area of finance. Moreover, in those cases where territorial states did have active assemblies, public creditors tended to be

[5] See Postan (1952 pp.216-218) for an example of this argument.

weakly represented within them. But, as was the case with city-states, the structure of representative institutions in territorial states also depended on underlying factors. First, their larger size raised costs of collective action for those who would seek to use a central assembly to regularly monitor the actions of a sovereign. Blockmans (1978, 1997) has emphasized the fundamental importance of distance as a factor influencing representative activity in pre-modern Europe. The second critical feature of territorial states was that those with liquid wealth (merchants) made up a small minority of the political elite and consequently a small fraction of representatives in representative assemblies of these larger states, which were often dominated by the landowning nobility. The nature of the asset they held and their economic activities gave landowners less of an ability and an incentive to invest in public debt.

So, in sum, access to credit for European states was associated with the presence of active representative institutions, but the character of these institutions was itself dependent on the twin underlying factors of distance and the wealth composition of the political elite. Moreover, once the political division of Europe into city-states and territorial states occurred, and this took place by the end of the thirteenth century, the weight of these twin underlying conditions was preponderant in determining the form of a state's representative institutions. The implication is that if a representative assembly with strong prerogatives had been transplanted from a city-state to a large territorial state, in all likelihood, it would not have produced the same outcome with regard to public credit, and the assembly itself might have failed to take root.

In the end, while city-states for several centuries proved extraordinarily robust as a form of political organization, and to a point that is often not fully recognized, we also know that they did eventually become obsolete. One might ask why this was the case given the financial advantage that I emphasize. While there were undoubtedly multiple factors

at work, ultimately part of the answer to this question is that the same factor that made it possible for city-states to sustain active representative assemblies, and thus gain access to credit, also eventually placed them at an increasing disadvantage on other dimensions. Small size made it possible to have an intensive form of representation, but it also meant not taking advantage of changing economies of scale in military organization as a result of new technology.[6] This effect may also have operated through changing economies of scale in economic production. In other words, small size favored one particular path of institutional development, but it also ultimately had significant costs.

1.1 Why Might Representation Matter for Public Credit?

In Chapter 2, I will present my theoretical argument in formal terms, using a game theoretic model of interaction between an executive, who could be either a prince (as would be the case in a monarchy) or a chief magistrate (as would be the case in a republic) and a group of potential lenders. In the model lenders have the option of forming a representative assembly to monitor the executive. Rather than being taken as exogenous, however, I show how whether a representative assembly (and thus public credit) develops might depend on underlying conditions.

There exist arguments that by placing a check on executive actions, the presence of a representative assembly with strong prerogatives in the area of finance can give a state improved access to credit. Speaking in more general terms, Dewatripont and Tirole (1994) have referred to a "representation hypothesis" whereby in a situation with a single debtor and a large number of creditors, then creditors (and thus borrowers) can benefit from the existence of a centralized institution that undertakes the activity of monitoring the debtor. Existing formal models of representative assemblies and public debt emphasize

[6] This latter point has been made forcefully by Tilly (1990).

the effect induced by having an assembly that can levy *ex post* sanctions on an executive who defaults, with sanctions involving actions like refusing to approve or collect new taxes, or to otherwise refuse subsequent policies proposed by the sovereign.[7] In contemporary corporate finance terminology, this would be described as an assembly that engages in "passive monitoring". It would collect retrospective information on whether a default had occurred and impose a sanction if warranted, but it would not intervene with financial management prior to a default taking place.

In Chapter 2, I will consider the case where an assembly acts as a passive monitor, but I will also emphasize the possibility that an assembly engages in "active monitoring."[8] Active monitoring involves the possibility of intervening to influence policy decisions so as to avoid having a default occur in the first place. It can be necessitated by the fact that in response to exogenous events, certain policy actions such as raising taxes, cutting spending, or reorganizing revenue collection may be necessary to avoid default occurring, yet executives may find these actions politically costly. In other words, the key assumption here is that default may occur not only because executives have the money but choose not to pay; it can also take place if executives are unwilling to take certain corrective actions that could avoid a default occurring in the first place. A prime example would be a case where an executive prefers not to scale back a military engagement because of the private returns that such engagement brings. If it is difficult to anticipate or contract over these corrective actions in advance, then the alternative is to grant investors a degree of direct control over policies.[9]

[7] Formal versions of this argument have been presented by Weingast (1997) and by Robinson (1998) where an assembly has the ability to coordinate actions of lenders and provides a mechanism for sanctioning executives who default.

[8] See Tirole (2006 part III) for the distinction between active and passive monitoring.

[9] Aghion and Bolton (1992) develop a model that illustrates this phenomenon. Their work builds on the contribution by Grossman and Hart (1986) that established how granting ownership can be a solution to problems of contractual incompleteness.

The distinction I draw between assemblies that engage in active and passive monitoring is important because we can examine historical evidence to consider which of these two scenarios provides a more realistic depiction of the prerogatives enjoyed by different representative assemblies in medieval and early modern Europe. To the extent that both of these regimes existed, we can also make judgements about their relative effectiveness. I will argue that while we observe a strong association between access to public credit and the presence of an assembly with prerogatives that allow it to engage in active monitoring, there is much less evidence that the ability of an assembly to engage in passive monitoring produced a financial advantage. This relative unimportance of the ability to engage in *ex post* sanctions parallels the important findings of Tomz (2007) regarding international lending for a later period.

In addition to emphasizing the distinction between active and passive monitoring, where the model I present in Chapter 2 departs from this existing work is in suggesting how public credit and active monitoring by creditors can each be seen as endogenous outcomes dependent on underlying conditions. First, in more geographically dispersed polities it was more costly to sustain a representative assembly, and particularly one that would meet frequently enough to engage in active monitoring of an executive. Second, in polities where a large fraction of the elite held liquid forms of wealth that could be invested in public debt, then lenders would anticipate that if a representative assembly formed, it would be more likely that such an institution would take decisions favorable to government creditors. Underlying conditions involving size of the polity and wealth composition of the political elite were favorable to these outcomes in city-states but less favorable in territorial states. While it is plausible that the establishment of a strong representative assembly might also depend on events that temporarily lowered costs of collective action in territorial states, my empirical results suggest that if such events existed, they did little to lead to a general

convergence over time in the form of representative assemblies between city-states and territorial states.[10] While the twin outcomes of public credit and an active representative assembly emerged in city-states as early as the thirteenth century, it took over four centuries before the same pair of outcomes was observed in a large territorial state, with England after 1688.

1.2 The Evolution of Public Credit

When considering medieval and early modern Europe, it is widely argued that imperatives of war drove states both to improve revenue collection and to seek access to credit.[11] What presents a potential puzzle about public borrowing is that despite its general usefulness, some European states succeeded in establishing a public debt much earlier than others, and in addition, the relative cost of debt finance for different states varied enormously. In this book I seek an explanation for this variation.[12] While the imperatives of war existed from an early date, European states before 1000 initially faced a constraint in that there were few private individuals or entities with liquid wealth that could be used to provide credit. In the three centuries between 1000 and 1300, Europe experienced an economic expansion, accompanied by growth of commerce, that altered this picture. With some simplification, we can say that two forms of public borrowing then emerged.[13] Some states, especially territorial monarchies, began to contract loans directly from merchants. These loans had

[10] See, for example, Acemoglu and Robinson's interpretation of the role of Dutch support in the England's Glorious Revolution of 1688 (2005 p.178).

[11] This point has been made most effectively in recent years by Tilly (1990), but it also has long been emphasized in historical work on the development of public credit, a good example of which is Ehrenberg (1928). The argument about a link between military imperatives and state organization has been emphasized at least since Hintze (1906). The effect of war on state organization has been studied in depth more recently by Ertman (1997) and Downing (1992).

[12] Hicks (1969), Parker (1974), and more recently Macdonald (2003) have also emphasized the idea that the timing of the establishment of a long-term public debt in different states presents an important empirical puzzle.

[13] See Usher (1943), Ehrenberg (1928) Munro (2003), Tracy (2003), Homer and Sylla (1996), and Macdonald (2003) for surveys of the evolution of public credit in Europe.

two main characteristics - they were short-term, and they were contracted at very high rates of interest. The loans from Italian bankers to Edward III during the Hundred Years' War provide a well-known example. Other states, especially city-states, succeeded in taking the further step of establishing a long-term debt. In the case of the Italian city-states this involved forced loans that nonetheless paid interest, and for which an active secondary market soon developed. Outside of Italy, city-states obtained finance by issuing annuities (referred to as *rentes* in French or *renten* in Dutch and German). These were not, strictly speaking, loans as they involved the permanent transfer of a specific sum to the "borrower" in exchange for the "lender" receiving a regular income stream, alternatively for one lifetime, several lives, or in perpetuity. It has been convincingly argued that one reason this type of contract was preferred is that, since the principal was never repaid, it did not run as easily afoul of usury restrictions as was the case with conventional loans.[14] Contracts based on *rentes* also became a major source of finance for those seeking to make agricultural improvements, again based on the exchange of a sum in exchange for a future income stream. In what follows I will regularly compare the rates at which governments could issue *rentes* with those prevailing for private finance.[15] The northern European model of the *rentes* in fact became the model for public debt in Europe up to the end of the nineteenth century.

While the idea of long-term public borrowing emerged at an early date, either following the Italian model or the annuities model, the speed with which European states gained access to this type of finance varied tremendously, as did the financial terms that states found it necessary to concede to lenders in order to obtain finance. We have numerous records of self-governing cities in Italy and the Low Countries issuing debt from the thirteenth

[14] See Munro (2003) for an extended discussion of this point, as well as the continued barriers to the development of markets for public annuities.

[15] To do so I will draw on the data on land rents collected by Clark (1988).

century and cities or towns in Germany, Switzerland, and Catalonia from the fourteenth century. In contrast, among larger territorial states Castile did not begin to issue long-term debt until the end of the fifteenth century, and the French monarchy did not establish a long-term debt until 1522. In the words of Geoffrey Parker "It was a surprisingly long time before princes were able to emulate their towns."[16] In addition, when they did establish a long term debt, territorial states appear to have paid significantly higher interest rates than did their city-state counterparts. As I will argue below, the interest rate differential between city-states and territorial states cannot be explained by some selection process whereby only the most successful city-states survived over time, because the differential was relatively constant over the period I consider. Another possible explanation for this differential development is that there were greater legal and technical obstacles to the development of long-term debt in territorial states, but the classic studies by Ehrenberg (1928) and Fryde and Fryde (1963) both argue that princes in medieval territorial states had from a very early date evolved the principle of granting specific individuals a fixed income stream from their revenues in exchange for a service. Evidence reviewed by Usher (1943) demonstrates that the French monarchy was paying annuities to certain bodies as early as 1332, yet it took another two centuries before French monarchs used this same system to establish a long-term public debt.[17] So, it remains to be explained why princes were so slow to take the logical next step of granting a fixed income stream in exchange for a financial service. It also seems unlikely that princes would have preferred to opt for

[16] Parker (1974 p.567). The significant time lag between the establishment of long-term debts in city-republics and in territorial monarchies has also been emphasized by Hicks (1969 p.94).

[17] See Usher (1943 pp.162-63) who draws his evidence from de Boislisle (1875). In terms of legal obstacles, some authors also refer to the fact that credibility of the debts of city-states was reinforced by a principle whereby individual merchants within a city could be held personally liable by third parties and have their assets seized if their municipality defaulted on its financial obligations. However, as Greif (2006) demonstrates this "community responsibility system" undergirded trade and commerce in a very wide number of medieval European communities. As a result, it was not specific to city-states. The unlimited liability principle also had no application in the case of debts held by a city's own residents, which was the most frequent case.

short-term borrowing, given the clear constraints implied by this type of finance, both in terms of its high cost and limited ability to leverage current resources. The more likely explanation I will pursue is that territorial rulers did not establish a long-term debt earlier, because no one was willing to lend to them on such terms.

1.3 The Emergence of Political Representation

While the English parliamentary experience is the most frequently studied, it is now recognized that a very large number of medieval and early modern European states had representative assemblies that often had significant prerogatives. The period between 1250 and 1500 in particular is highlighted as one where there was a flowering of assemblies across Europe, both in self governing cities and in larger territorial entities.[18] Georges de Lagarde (1937, 1939) referred to this period as a "corporatist age" characterized by spontaneous action of different social groups seeking recognition from princes.[19] What is interesting to ask is why this development of representative assemblies across Europe during this era was only accompanied by the development of a long-term public debt in city-states. For the period after 1500 till the end of the eighteenth century scholars often point to a progressive weakening of representative institutions, in particular in the larger territorial states of Europe. Historians like Lagarde (1937) have referred to this later era as the "age of the territorial state". Interestingly, it was not until this era of presumed weakening in representative institutions that territorial state governments first succeeded in establishing long-term public debts.

Historians have devoted much attention to the development of representative institu-

[18] Bisson (1973), de Lagarde (1937, 1939), Lousse (1937, 1966), Marongiu (1968), Major (1960), Blockmans (1978, 1997), Gilissen (1969), Graves (2001).

[19] In constructing his arguments Lagarde drew heavily on the work of Otto von Gierke. Likewise, Bisson (1973 p.1, citing Cheyney (1936)) refers to the period between 1250 and 1450 as a "restless, assembly-loving age".

tions in Europe during the two above periods, producing detailed studies of individual assemblies, synthetic accounts, as well as studies comparing a small number of states. In this book I will draw on this existing work to present systematic data on the prerogatives and level of activity of representative assemblies in a broad number of European states over the period in question. This broad brush effort will inevitably contain errors and misinterpretations, and it will lack the detail that can be presented in studies of a single country or a small group of countries. It does, however, respond to the call by historians like Blockmans (1978) for further effort to construct broad comparative measures of representative institutions in medieval and early modern Europe. The existence of comparative data on representative institutions will also make it possible to conduct quantitative empirical tests investigating the causes and economic consequences of political representation.

Since the arguments I make about representative institutions hinge on the distinction between "city-states" and "territorial states", before proceeding further, it makes sense to state more explicitly what I mean by each of these two terms. The terms "city-state" and "territorial state" were popularized by nineteenth century German historians to differentiate between different types of political entities in pre-modern Europe. In developing these terms scholars were no doubt influenced by pre-modern experience in Germany whereby a number of self-governing cities, such as Mainz and Cologne, existed alongside principalities, such as Bavaria and Saxony, that occupied larger swaths of territory. When referring to a "city-state" today, scholars commonly refer to a self-governing unit composed of a town and a band of encircling territory.[20] However, what especially seems to distinguish pre-modern European city-states is that full citizenship rights were restricted to residents of the city in question. This was true even in cases like medieval Venice where the size of the dependent territory controlled by the city grew quite large. City-states developed

[20] See, for example, the definition offered in Finer (1997) vol.1 p.6.

in a number of European regions as a result of a process through which, by the end of the thirteenth century, individual cities asserted either formal or de facto control over their affairs instead of being fully controlled by princely overlords. The exact process through which cities in Germany, Northern Italy, Switzerland, and the Low Countries established this independence varied, as did the extent of their subsequent insulation from princely impositions. When speaking of a "territorial state" authors commonly refer to a self-governing unit that covers a broader swath of territory than does a city-state and where any political rights (if they existed) were not limited to residents of a core city.

While there was a clear difference between representative institutions in city-states and territorial states, I will also argue that it is inaccurate to characterize this distinction as being one where either "limited government" or "checks and balances" on executive authority prevailed in republican city-states while monarchs in territorial states always governed arbitrarily and absolutely. In fact, there is now abundant evidence that monarchs in many European territorial states were constrained by representative assemblies that enjoyed substantial prerogatives with regard to approving new taxes.[21] This is especially true for the period before 1500, whereas after 1500 authors have noted a decline in the activity and prerogatives of representative assemblies in many European territorial states. The key point for the evolution of public credit, however, is that representation of mercantile groups, and in particular public creditors, was generally weak within the assemblies of territorial states. Within representative bodies in city-states, merchants tended to play a much more important role, but it was not always the case that executives in city-states faced greater checks on their actions. In many instances decisions were controlled by narrow oligarchies that were highly insulated from pressures exerted by broader social groups within a city-state. So, for example, to a modern observer the system of government in

[21] See in particular the discussion in Tracy (1994) for an overview of this question with regard to taxation.

sixteenth century Cologne has many similarities with a police state, features that Scribner (1976) argues help explain why the Reformation had so little effect within this city. It should also be emphasized that the financial policies pursued by city-states often had very inegalitarian consequences, as mercantile groups profited from investments in public debt while debts were serviced by indirect taxes on common consumption goods.

In addition to their differing social composition, where representative bodies in city-states appear to have differed fundamentally from most territorial state assemblies is in that they met frequently, and they played a direct role in monitoring public spending and borrowing. If a representative body is to engage in active monitoring of public finances in this manner, then it seems plausible to suggest that the assembly will need to meet frequently. This was the norm in city-states, but not in larger territorial states where it was rare to see assemblies meet even annually. A representative assembly that did not met frequently could still play a powerful role with respect to taxation if there was an established precedent that a ruler needed to obtain consent before creating a new tax or altering an existing one. But this power to refuse new taxes should be distinguished from power to monitor public finances.

Ultimately, if representative bodies in city-states were more effective mechanisms in providing access to credit, this is not something that happened by accident. I will argue that it was an outcome dependent on two factors: (1) the small size of these polities and (2) the wealth composition of their political elite. In an era of substantial communication and transport costs, costs of collective action for establishing and maintaining a representative assembly were much higher in large territorial states when compared with small city-states.[22] Within some cities it was possible to have an assembly that was summoned by a simple device like a bell. So, for example, the General Council in thirteenth century

[22] As noted above, the importance of distance in conditioning the development of representative institutions in Europe has been emphasized by Blockmans (1978, 1997).

Siena was also known as the "Council of the Bell", because of the way its members were summoned.[23] In a large territorial state this was obviously not possible. We have abundant historical evidence pointing to transport and communication costs as a hindrance to frequent meetings of pre-modern European assemblies. In chapter 4 I will present systematic evidence suggesting first that assemblies in city-states met more frequently than assemblies in territorial states. Then I will show that within the group of territorial states, we also observe a strong negative correlation between state size and meeting frequency.

City-states also differed fundamentally from territorial states in the types of wealth held by their elite. Historical work has long emphasized a distinction between city-states where merchants predominated and territorial states dominated by a landowning and rural nobility.[24] This broad distinction should not be turned into an absolute one where political elites in territorial states are seen as having held *only* land and political elites in city-states are seen as having owned only more liquid forms of wealth. There is certainly evidence that the rich within city-states often had significant landholdings in addition to their financial and commercial investments.[25] However, if we accept that land composed the vast majority of wealth in Europe at this time and that more liquid forms of wealth were concentrated in cities, then it would seem difficult to dispute the idea that members of the elite within city-states were more likely to have wealth that could easily be invested in an asset like public debt. It is also arguably the case that there was greater demand on the part of merchants, when compared with landowners, for an asset like public debt that could be used to diversify out of commercial activities that brought high profits but which also involved high risk. As a result of the above factors, the composition of elite wealth arguably had direct implications for the politics of public debt in city-states and

[23] See Bowsky (1981 p.85)

[24] Pirenne (1910, 1925), Guizot (1838), Weber (1921), Sidgwick (1903), Van Werveke (1963), and Finer (1995)

[25] See for example Strait (1974) for the case of Cologne in the twelfth century.

territorial states. Within city-states there was a pool of potential investors in public debt, and the small size of these states meant that active representative institutions could be sustained that allowed creditors to monitor public finances. Territorial states also of course had numerous individuals with liquid wealth, but given the overwhelming presence of landowners, these individuals made up a much smaller section of the political elite than in city-states.

While in Europe between 1250 and 1750 the two underlying conditions of small size and political dominance of merchants tended to go hand in hand, it is important to emphasize that they were not perfectly correlated. As a result, my argument cannot be neatly collapsed into a distinction between two types of states of the sort emphasized by Tilly (1990). There existed large territorial states where urban interests dominated a representative assembly, as was the case with Castile during the seventeenth century as will be considered in Chapter 7. There were also cases of a small city-state like Siena after 1355 where merchants lost political power. Examining these atypical cases will be a particularly important goal for my case study chapters.

The Dutch Republic after 1572 and Great Britain after 1688 were two important exceptions to the pattern I identify with regard to territorial states. Each had a representative assembly that met frequently and which enjoyed strong financial prerogatives. Scholarship has also emphasized how each state was able to obtain access to increasingly large amounts of finance at low rates of interest. A closer examination, as I will discuss in Chapter 7, suggests how the experience of the Dutch Republic actually fits my overall argument quite closely. It was a small polity in geographic terms, which facilitated an intensive form of representation, and its representative institutions were dominated by cities and by merchants within those cities. In other words, the Dutch Republic was in many ways like a city-state that had been scaled up. It would be difficult to make the same claim for Great

Britain after 1688 where the "monied interest" was only a small minority in parliament, yet Britain pursued a set of financial and economic policies favorable to commercial interests. When combined with the overall empirical conclusions from my study, the British experience raises an interesting question - if city-states settled on an equilibrium outcome of financial development combined with strong representative institutions by the end of the thirteenth century, then why did it take four centuries before the same outcome was observed in a true territorial state or national state? One potential answer is that the post-1688 outcome depended on the fact that England was a precursor in developing a new, modern style of politics characterized by increased political communication and an active news culture, the development of political parties, as well as broader social changes.[26]

1.4 Lessons from a Broad Sample of States

I will support my arguments by presenting and analyzing systematic data on public credit and political representation for thirty-one European states over the five centuries between 1250 and 1750. In Chapter 3 I will present evidence on the development of public credit in terms of the date at which states established a long-term debt and the cost at which they could subsequently obtain access to finance, in addition to reviewing information on the quantity of credit obtained. The evidence supports the idea of a financial advantage enjoyed by city-states that cannot be easily accounted for by strictly economic factors. In Chapter 4 I will present systematic evidence on the evolution and prerogatives of representative assemblies in the same set of thirty-one states, and I will place this evidence in the context of the extensive existing historical debates about the emergence of representative institutions in Europe. For each state I use available evidence from secondary sources to assess whether a representative assembly existed, whether its consent was required for new

[26] See Pincus (2006) for a discussion of the social changes underlying the Glorious Revolution of 1688.

taxes to be implemented, whether the assembly played a direct role in administering taxes, and whether the assembly played a direct role with respect to the issuance and management of public debt. Finally, the chapter also presents evidence on who was represented within these assemblies, in addition to charting the frequency with which assemblies met. There is evidence not only that city-state assemblies met more frequently, but also that within the group of territorial states, there was a negative correlation between the geographic size of the polity and the intensity of representative activity.

Chapter 5 presents the results of my core statistical tests combining the evidence on the evolution of public credit with evidence on political representation. The goal here is to test three alternative hypotheses: (1) that access to credit depended on commercial and economic development (2) that access to credit depended on the presence of active representative institutions (independent of underlying conditions), (3) and finally that access to credit depended on the differing underlying conditions in city-states and territorial states. I first consider statistically the conditions under which a state was more likely to create a long-term public debt. This is followed by a consideration of the determinants of the cost of government borrowing. In both cases I find that the evidence is most directly supportive of hypothesis 3. There is clear evidence from these regressions that the presence of a representative assembly, and in particular one engaging in active monitoring, was associated with earlier creation of a long-term debt. However, once one controls for the difference between city-states and territorial states, this apparent effect of representative institutions disappears. This result is consistent with my core argument that the emergence and subsequent behavior of a representative assembly depended on underlying conditions involving state size and the wealth composition of the political elite. The result would also, however, be consistent with an interpretation that other differences between city-states and territorial states, that had nothing to do with their political features, drove outcomes with

regard to credit. While my regressions do include a number of controls for economic conditions, in addition to suggesting an instrumental variables strategy to deal with this problem, ultimately it is not possibly to completely rule out this alternative interpretation in the broad sample regressions performed here. This makes the results of the case study material in Chapters 6 and 7 particularly important.

1.5 Lessons from Individual Cases

Chapters 6 and 7 of this study will turn to a more detailed analysis of political representation and public credit in several specific states. The goal here will be to investigate to what extent evidence at the state level supports the interpretation I have drawn from the statistical tests in Chapter 5, which is that the financial advantage of city-states was attributable to the structure of their representative institutions but more fundamentally to underlying conditions involving polity size and elite wealth composition. Presenting detailed evidence of this sort is particularly important to the extent that my statistical tests in Chapter 5 cannot rule out the possibility that the difference between city-states and territorial states is attributable to unobserved factors that have nothing to do with representative institutions and nothing to do with the underlying conditions upon which I have laid so much emphasis. One possibility is that financial advantage of city-states was attributable to the political power of merchants, but this political power was exercised through informal social networks and lobbying, rather than through formal control of representative assemblies. In this case I might be correct to emphasize the importance of merchant political power, but my emphasis on formal representative institutions might be misplaced. A second possibility is that the financial advantage of city-states can be attributed to economic factors or pressures within these states that created high costs of defaulting on debt irrespective of the social groups that held political power. Case studies

of individual states can investigate both of these questions by providing detailed evidence on conflict over public debt and by investigating moments of change within individual states.

Chapter 6 considers the politics of public credit in three city-states: Cologne, Genoa, and Siena. All three of these cities had the sort of representative political institutions that could serve as an effective mechanism for creditors to engage in active monitoring of state finances. All three cities also established public debts at an early date. The question is whether there was actually any causal link between representative institutions and public credit, and if so what factors conditioned the development of these institutions. A closer look at developments in each of these cities reveals that in each case, public debt, and in particular the taxes required to service debt, were a subject of frequent and sometimes violent political contestation. With some risk of simplification, we can speak of an underlying conflict between mercantile groups who held public annuities and who sought to ensure that taxes would be levied to service these obligations and other social groups who protested against heavy indirect taxes on common consumption goods. Disputes about public finances were often coupled with conflict over the structure of representative institutions in each city and the question of which social groups should be represented on city councils. Should these bodies retain an oligarchical form with a small number of families in control, or should they instead be opened to other groups and in particular guild representatives? The fact that periodic uprisings within these cities focused on the goal of reforming membership of city councils helps attest to the importance of these institutions. We also observe that when uprisings were successful in at least temporarily overthrowing existing regimes, this had direct consequences for public credit in the form of events like unilateral interest rate reductions by states, partial defaults, or adverse swings in market prices for government debt.

In terms of the individual cases, Cologne presents a prototypical example where a political elite with a significant engagement in commerce invested heavily in public annuities while simultaneously retaining an oligarchic control of the city's political institutions. Cologne was also a particularly long-lasting city-state, as it retained a high degree of political independence through the end of the eighteenth century. The case of Cologne provides particularly fascinating evidence about the importance of creditor interests controlling the city council, because creditors did temporarily lose political power as a consequence of a revolt in 1513, and one policy consequence of this change in regime was a partial default on public debt.

Genoa was atypical among the city-states considered in this study in that after 1407 management of both its debt and revenues was delegated to an independent corporation, the Casa di San Giorgio. In Chapter 6 I will argue that while the establishment of the Casa di San Giorgio may do much to explain Genoa's subsequent financial success, this success was not attributable to the fact that it was an institution that somehow insulated Genoese public finances from Genoese politics. The success of the Casa was instead ultimately dependent on the fact that mercantile interests held prominence both within the Casa and within the institutions of the Genoese Republic itself. In other words, the Casa di San Giorgio existed and prospered because Genoa had a dominant mercantile elite.

Finally, I consider the apparently anomalous case of the city-state of Siena, a state that drops out of my cross-country data set from the second half of the fourteenth century. Siena provides a contrast to the examples of financial success presented by Cologne and Genoa. During the years between 1287 and 1355, Siena was ruled by an oligarchical regime that bore many resemblances to the regimes in the other states considered here. In contrast to the other cases, however, Siena provides an example of how a popular uprising could result in an enduring change of regime with enduring consequences for public finances. After

a revolution in 1355, a series of regimes ruled the city, many of which had a significant element of popular control, and none of which were characterized by the dominance of a merchant oligarchy. After 1355 Siena experienced a period of unstable public finances to match its political turmoil. In sum, the Sienese case attests to the significance of merchant control for public credit, precisely because this is an instance where a merchant elite lost power.

Chapter 7 takes a closer look at the link between political representation and public credit in three territorial states: France, Castile, and the Dutch Republic. France and Castile have traditionally been referred to as states that lacked creditworthiness. The Dutch Republic has been seen as a model for the successful development of public credit, an explanation which at first glance seems at variance with my emphasis on the financial disadvantages faced by territorial states. A common explanation for the differing outcomes in these three states has been to emphasize institutional differences between them; the Dutch Republic succeeded because it was a republic in which executive power was constrained by a strong representative assembly, whereas the France and Castile were "absolute" monarchies where rulers faced few institutional constraints. I will argue that the differential development of representative assemblies, and thus public credit, in each of these three polities depended heavily on both their geographic size and the extent to which mercantile groups were represented within them.

My investigation of France will focus on an interesting aspect of the French monarchy's attempts to create a long-term public debt. France's national representative institution, the Estates General, met very infrequently, and when it was convened there is little evidence that it's members demonstrated strong sympathies for the interests of state creditors. Though France lacked an active representative assembly at the national level, at the municipal level in Paris a system for issuing public annuities developed from a very early

date, and it was by making use of this system that the French monarchy first established a long-term debt in 1522. As remarked by Cauwès (1895) this system of issuing *rentes sur l'Hôtel de Ville* bore a very close resemblance to the practice in states where active representative assemblies controlled public debt. So, in a sense, the initial institutional evolution of public credit in France was similar to that which had occurred in European city-states. The problem is that the system of *rentes sur l'Hôtel de Ville* failed once an attempt was made to expand its scale so that the magistrates of Paris were expected to monitor revenue collection in more distant locations. In a sense then, the problem was not that France lacked the right institutions to develop public credit, it was that France lacked appropriate institutions that were contiguous with the extent of the polity. I will argue that a prominent explanation for this institutional involved the sheer scale of the French polity.

The Dutch Republic presents an apparently anomalous case for my argument - a territorial state that developed an active representative assembly with strong prerogatives and which became a model in the area of public finance. A closer look at the evidence reveals, as numerous scholars have emphasized, that the Netherlands from the sixteenth century was essentially a confederation where individual cities remained politically predominant, and the governing bodies of these municipalities were run by merchant groups who themselves invested heavily in public credit. In addition to functioning much like a confederation of cities, the Dutch Republic was also characterized by a high intensity of representative activity. What is important to emphasize here, however, is that there is evidence that from a very early date, well before the Dutch revolt against Habsburg rule, that representative activity at the regional level in the Low Countries was favored by the geographic proximity of major cities. In sum, there was nothing accidental about the development of active representative institutions in the Dutch Republic. Outcomes

with regard to both representative institutions and public credit depended on the same underlying conditions that I have emphasized for city-states.

As a final case, it is particularly interesting to consider developments in Castile during the sixteenth century in light of events in the Dutch Republic. One might think that there is a straightforward explanation for the difference between these two states; the Dutch Republic was a "success" in terms of public borrowing because it had a strong representative assembly with prerogatives over finance while Castile was a failure because it had an "absolutist" regime in which the representative assembly was weak. A closer look that takes account of recent historiography shows a more complicated picture that belies simple arguments about "absolutism" in Castile. Much like the States of Holland (the most prominent provincial assembly in the Dutch Republic) by the sixteenth century, the Cortes of Castile was dominated by urban representatives chosen from a fixed set of towns. It also had very significant prerogatives with regard to the approval of taxation and the administration of revenue collection. Unlike the States of Holland, however, the Cortes never succeeded in establishing itself as an effective active monitor of public spending and debt issues, despite efforts to the contrary. In Chapter 7 I will argue that one prominent reason why Castilian representative institutions failed to function like Dutch representative institutions involved the much greater geographical size of the Castilian polity. In a context where travel and communication were costly, this helped create a serious agency problem in which the Castilian cities that sent representatives to the Cortes were ultimately unable to control the actions of these individuals.

1.6 Plan of the Book

In what follows I will develop and support my arguments in the following steps. Chapter 2 conducts a brief theoretical investigation of the factors that are likely to influence a state's

ability to obtain long-term debt finance. This includes the role played by representative institutions, the extent to which these institutions themselves depend upon underlying factors like state size and the social composition of the elite, and the possibility that more strictly economic factors are likely to drive the outcome. To aid in this effort, I make use of a game theoretic model of interaction between a borrower and multiple potential lenders.

Chapter 3 then presents a brief historical overview of the development of sovereign debt between 1250 and 1750, concentrating on presenting the comparative data I have assembled on dates for initial establishment of a long term debt in 31 European states, quantities borrowed, and on the interest rates at which state were able to borrow. In so doing I build on the important initial work of Epstein (2000 ch.2). In addition to presenting the data, Chapter 3 also considers to what extent the variation with regard with regard to public debt can be explained by factors that are not necessarily related to political institutions, like the steady decline in private interest rates that occurred throughout Europe during this period.

Chapter 4 continues the historical overview, in this case focusing on the evolution of representative institutions in Europe. I concentrate on presenting the systematic data that I have compiled on existence of representative assemblies, their prerogatives over finance, and the frequency of their meetings, all in light of existing historical evidence. I chart the differences in representative bodies between city-states and territorial states, while also giving close consideration to institutional variation within the group of territorial states and across time.

Chapter 5 presents my core statistical tests, making use of the data presented in the previous two chapters. Chapters 6, and 7 then turn to evidence that from a more selected set of city-state and territorial state cases. Finally, Chapter 8 concludes.

3 The Evolution of Public Credit

The goal of this chapter is to review the development of long-term borrowing by European states, asking when states first established debts and what interest rate they paid on this debt. I provide evidence of a significant difference between city-states and territorial states, with city-states enjoying an apparent financial advantage that allowed them to begin borrowing earlier and to obtain access to lower cost finance. This financial advantage does not appear easily accounted for by economic differences, such as a lower level of private interest rates in city-states, or lower revenue volatility in this group of states. This raises the possibility that the financial advantage of city-states depended on features of their representative institutions - the subject that I will take up in Chapter 4.

3.1 When did States First Borrow Long-Term?

There has been much written about the initial creation of long-term public debts by individual European states, but less effort to investigate in a systematic fashion why some states established debts much earlier than others. In what follows I present information on the date at which we first observe an interest rate on a long-term loan for 31 European states between 1250 and 1750. To construct this database I used a large variety of secondary sources. This effort began by reviewing each of the sources cited by Epstein (2000 ch.2) in his study of the evolution of public debt, and then extending this evidence by incorporating a large number of additional sources. All sources used to construct the debt data are listed in the following pages.

It will not be a surprise to those familiar with the history of public debt to learn, based on this data, that self governing cities, on average, created long-term public debts earlier than territorial states. What may be less frequently recognized is how general this phenomenon was, and how large the time lag was between the many city-states that

began to issue annuities in the thirteenth century and the creation of long-term debts by territorial states, the first of which did not take this action until the beginning of the sixteenth century. Equally importantly, documenting variation within the group of city-states and within the group of territorial states can help identify whether the date at which states created a long-term debt depended primarily on the extent of commercialization of an economy, or alternatively whether certain political conditions favored early creation of a long-term debt. For some European states there is fairly unanimous agreement on the date at which a long-term debt was created. The French monarchy's decision in 1522 to issue *rentes* via the municipality of Paris is traditionally seen as the founding date for France's national debt.[32] For most other European states there is less consensus on an exact starting date, particularly for early political entities that in some cases did not keep systematic public accounts.[33] One simple and unbiased indicator useful for addressing this question is to classify states according to the first year in which there is concrete information on the interest rate associated with a long-term loan.

Table 1 presents this information for 31 different autonomous cities and territorial states in Europe ranging from Arras in 1241 to Denmark in 1725. The sources for this data as well as the subsequent data on costs of borrowing are as follows.[34] To aid in interpretation,

[32] Hamilton (1936) cites this as the first national debt, though Castile actually established a long-term debt slightly earlier.

[33] This was the case, for example, in Douai prior to 1297 or reportedly in the German principalities (Carsten, 1959).

[34] Sources consulted included: Arras (Bougard 1988, p.61). Austria (Dickson 1987, p.404). Barcelona (Usher, 1943, p.171). Basel (Usher, 1943 p.171) and Gilomen (2003). Bologna (Carboni 1995 p.131). Castile (Ruiz-Martin 1975 p.14 and Mauro and Parker 1977 p.49). Cologne (Schneider 1954 p.491, Usher 1943 p.171, and Fryde and Fryde 1963 p.547). Denmark (Korner 1995 p.536 and Poulsen ESFDB). Dordrecht (Zuijderduijn 2006 p.6 and van der Burg, Derycke, and van der Heijden). Dortmund (Fryde and Fryde 1963 p.532). Douai (Espinas, 1902 and Usher 1943 p.158). England (Homer and Sylla 1996 p.126, Dickson 1967), Florence (Pezzolo 2001, 2006), France (Forbonnais, 1758 and Velde and Weir, 1992). Geneva (Bergier, 1962 p.119). Genoa (Day, 1963, Pezzolo 2001, and Homer and Sylla, 1996). Ghent (Van Werveke, 1934). Holland (Tracy 1985 and ESFDB). Leuven (Munro 2001, p.38). Mainz (Fryde and Fryde, 1963 p.552). Milan (de Luca 2006). Naples (Calabria 1991 pp.143-45). Nuremburg (Fryde and Fryde 1963 p.549 and Homer and Sylla 1996 p.117). Piedmont (de Luca 2006 and Felloni 1977 p.22). Papal States (Partner 1980 p.26 and Felloni 1977 p.22). Siena (Bowsky 1970 p.193). Tuscany (Felloni

Table 1: Date of First and Last Observed Long-Term Loan

City-states	**Territorial states**
Arras (1241)	Castile (1489-1598)
Venice (1262-1785)	Kingdom of Naples (1520-1785)
Siena (1290-1354)	France (1522-1793)
Dordrecht (1293-1572)	Holland (1522-1794)
Douai (1295-1399)	Papal States (1526-1785)
Genoa (1340-1785)	Duchy of Milan (1543-1785)
Florence (1347-1493)	Württemberg (1550)
Leuven (1356)	Austria (1555-1779)
Barcelona (1360-1630)	Piedmont (1684-1785)
Cologne (1375-1472)	Great Britain (1693-1798)
Dortmund (1375)	Tuscany (1700-1726)
Ghent (1375)	Denmark (1725)
Nuremburg (1381-1565)	
Basel (1383-1479)	
Zurich (1386-1404)	
Mainz (1415-1444)	
Bruges (1489)	
Geneva (1538-1681)	
Bologna (1555-1655)	

Figure 1 presents a histogram showing the number of states creating a long-term debt by date, distinguishing between city-states and territorial states. This helps clarify that for the majority of city-states, there is a record of long-term borrowing prior to 1400. For territorial states we see that only Castile created a long-term debt before 1500, but after this point territorial states moved to create debts in rapid succession. The evidence on city-states corresponds closely to the conclusions of existing historical surveys.[35] It demonstrates how the creation of long-term public debts by cities in the 13th and 14th centuries was a widespread phenomenon, focused especially in Northern Italy and the Low Countries but also involving free cities in Germany, as well as towns in Switzerland and Catalonia.

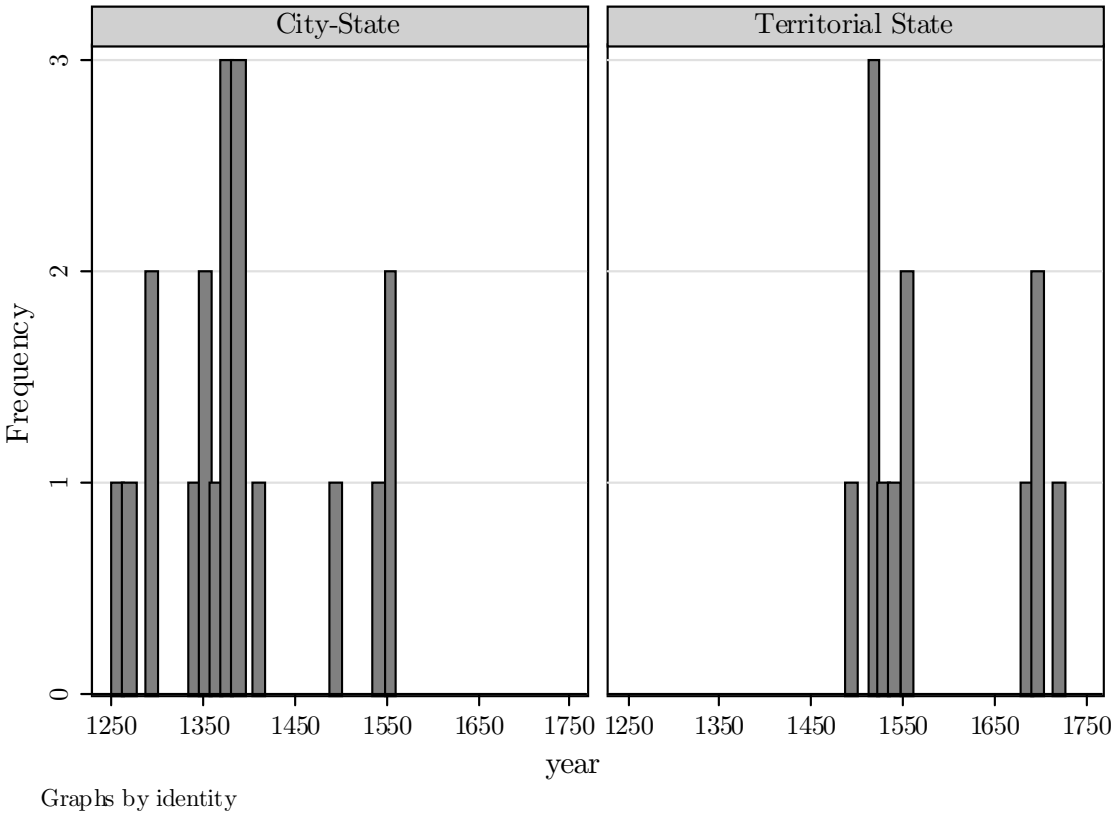
While Italian city-states like Genoa, Venice, and Florence are commonly seen as forerunners with regard to public debt, it was actually the system of municipal debt developed in northern Europe that would set the model for long-term government borrowing in Europe until the end of the nineteenth century. The contribution by Tracy (2003) has been influential in demonstrating how politically independent cities in Northern France and Flanders began selling annuities during the thirteenth century as a means of raising finance. Munro (2003) has charted this development in greater detail, emphasizing early debates whether annuities sales violated the prohibition on usury.

Though they initially raised debt finance through several mechanisms, during the thirteenth century Italian city-states converged on the use of forced loans as their primary financing instrument. To the extent that contributions, often referred to as *prestanza,* were obligatory for wealth holders one might see them as more of a tax than a loan. For

1977 p.22). Venice (Lane and Mueller pp.474-475). Vicenza (Carlotto 1993 pp.239-40). Württemberg (Carsten, 1959). Zurich (Fryde and Fryde, 1963 p.551).

[35] Such as Tracy (2003) and Munro (2003).

Figure 1: Timing of Establishment of Long-Term Debts



this among other reasons Kirshner (2006) has questioned the extent to which one can speak of Italian city-states as having public debts.[36] But unlike the forced loans one might usually think of as occurring in medieval Europe, the *prestanza* paid interest, even if there was not a provision for repayment of principal (this was of course also the case for the perpetual annuities sold by Northern European cities). In addition, in the large Italian city-states an active secondary market developed for these obligations. Because the forced loans used by fourteenth century Italian city-states were remunerated, and because we also know that the nominal interest rates paid on these loans often bore a close correlation with their yield on the secondary market, it is reasonable to suggest that the ability of states to establish them at an early date and to obtain finance at relatively low cost depended on the perceived creditworthiness of these city-state governments.[37]

Prior to 1500 when territorial states sought debt finance, they did so through short-term loans from merchants with repayment due in no more than one or two years, rather than long-term financing via sales of annuities. Some authors have suggested that monarchs in territorial states did this because they sought to avoid the constraints that long-term borrowing would imply in terms of commitment to dedicating a specific revenue stream to debt servicing.[38] One problem with this argument, as has been noted above, is that from a very early date rulers in many territorial states had developed the practice of paying an annuity or rent to certain individuals or entities. A second weakness of this argument is that short-term borrowing actually posed much greater financial constraints than did finance based on annuities. Short-term loans during this period were inevitably contracted

[36] He also suggests that these were not public debts because interest payments were on some occasions not made. But this is of course a property one also observes with public debts that are purely voluntarily subscribed.

[37] Throughout the first half of the fourteenth century the *prestiti* in Venice traded at an average of 85% of par, and interest payments were regularly respected. A subsequent fiscal crisis during the War of the Chioggia with Genoa led to a sharp drop if prestiti prices. In Genoa one sees a closer correlation between nominal interest rates on forced loans and their secondary market yields over a longer period.

[38] This view has been expressed by Fryde and Fryde (1963) and by Ormrod (1995).

at much higher interest rates than were the long-term loans of city-states, something Hicks (1969 p.93) attributes to the lack of credibility of a system where states were generally unable to repay and would thus inevitably seek to re-borrow what they were unable to repay. Fryde (1955) suggests that the effective interest rate on loans by the Bardi family to Edward III of England between 1328 and 1331 was 26 percent.[39] Two centuries later English monarchs were able to borrow short-term on the Antwerp money market at roughly half this rate (12-14 percent per annum), but this rate remained significantly higher than that paid by states financing themselves through long-term borrowing as will be seen below. Equally importantly, the quantity of finance that could be raised by short-term borrowing was ultimately limited compared to long-term borrowing.[40]

An alternative explanation for why European territorial states prior to 1500 did not establish long-term debts is that they made this choice because they would have found few creditors willing to purchase their debt, except if it promised a very high rate of return. It has been observed more generally that borrowers of questionable creditworthiness may need to rely on bank lending rather than issuing bonds because banks are better able to monitor debtors (Diamond 1991).

The speed with which territorial states moved to create long-term debts after 1500 suggests that rather than being produced by changes in individual states, this was a general phenomenon. The sixteenth century was a period of intensified warfare associated with the Habsburg attempt establish supremacy in Europe meaning that governments had an increased need for debt finance. It is recognized that the size of armies fielded by territorial

[39] This figure is based on a sum of 11,000 pounds sterling in "gifts" conceded to the Bardi on a total debt of 42,000 pounds (Fryde 19565 p.209). See Homer and Sylla (1996 p.99 and p.106) for a survey of short-term interest rates paid by territorial states prior to 1500.

[40] Outhwaite (1966 p.290) suggests that in 1560 during a period of heavy borrowing the English crown had 279,000 pounds sterling in loans outstanding on the Antwerp money market, "an amount greater than the Crown's ordinary revenue", but during this same time period states financing themselves through long-term borrowing were able to accumulate significantly larger debt stocks as well be shown below.

states increased dramatically after 1500. For two particularly dramatic examples, Parker (1988 p.206) reports estimates suggesting that between the 1470s and the 1630s, Spain increased the number of men it fielded from 20,000 to 300,000 and France increased the size of its army from 40,000 to 150,000. If it is acknowledged that the size of European armies grew substantially after 1500, there is nonetheless considerable debate whether this "military revolution" was a development attributable primarily to exogenous technological changes, such as the introduction of firearms, new infantry tactics, and new styles of fortification, or, alternatively, whether the military revolution depended above all on an exogenous increase in the intensity of inter-state competition within Europe.[41] The presentation of my core arguments in this book do not depend on which of these two interpretations is the more accurate, because they both involve forces that, from the standpoint of any individual state, were essentially exogenous. What this does suggest is that in Chapter 5, when I conduct a more systematic examination of the factors that prompted states to create long-term debts, it will be important to take account of this structural change after 1500.

One further feature apparent from Figure 1 involves the changing fortunes of city-states over time. Much historical work has described the period after 1500 as the age of the territorial state in Europe.[42] A number of city-states continued to borrow long-term after 1500, and for the cases of Geneva, Barcelona, Venice, and Genoa we have data available from the seventeenth century, and in the latter two cases the eighteenth century. But a number of city-states also exited the sample at an early date, and it is

[41] An example here is the debate whether the technological development of the *trace italienne* style of fortification produced an increase in army sizes. Parker (1988) emphasizes this idea, but Lynn (1991) shows that in the case of the French army there is little correspondence between the timing of the adoption of the *trace* and the observed increase in the number of forces. Kingra (1993) also criticizes Parker's interpretation, suggesting that the *trace italienne* was more of an effect produced by underlying trends.

[42] For an early emphasis on the transition between a Corporatist Age that ran from 1200 to 1500 and an age of the territorial state that followed see de Lagarde (1937).

worth considering why this was the case. Some of this may be attributable to the pattern of historical research. The period where a city-state first established a long-term debt may have tended to attract more attention than later centuries. A number of German city-states, such as Lübeck and Cologne retained a high degree of autonomy, including in the area of finance, through the nineteenth century, even though they are not present for these latter centuries in the dataset that I have been able to collect. In a larger number of cases, however, city-states drop out of the sample because they ceased to be independent. In some cases this occurred because of internal conflict and a fiscal crisis. This is the context in which in 1462 Mainz lost its status as a free imperial city.[43] In other cases a city lost its autonomy because it was forcibly absorbed by a territorial state, as took place with the city of Ghent during the periods of Burgundian and subsequent Habsburg control.[44] Finally, in still other cases a city relinquished some of its independence, but it did so by forming a league with other cities. So, for example, the city of Dordrecht disappears from the sample in 1572 not because its government failed or was absorbed, but because it became part of the United Provinces of the Netherlands. In Chapter 5's statistical analysis I will ask explicitly whether my overall conclusions may be influenced by the pattern whereby a number of city-states dropped out of the debt sample over time.

The above discussion has focused on the demand for credit by states. Ultimately, however, the ability of governments to borrow also depended on supply considerations involving the presence of a pool of potential investors seeking the sort of fixed income stream provided by a perpetual or life annuity. Existing evidence suggests that in medieval and early modern Europe individuals whose wealth was engaged in commerce could profit more directly from this type of savings instrument than did those whose wealth was primarily engaged in agricultural production. First, the fact that merchants held wealth that tended

[43] See the discussion in Fryde and Fryde (1963) pp.551-552 and Dollinger (1954) pp.458-60.
[44] See Blockmans (1994) and Boone (1990).

to be more liquid than that of landowners meant that when a government sought to borrow, they could shift wealth into an asset like public annuities more quickly.[45] Second, it has been observed that in medieval Europe merchants who made their initial fortunes in risky activities like long distance trade had an incentive once established to become *rentiers* by shifting part of their wealth into assets like public or private annuities that would provide a more regular source of income. In many cases merchants also diversified their wealth by purchasing land, an action that could arguably serve an economic purpose while also conferring social status. These points have been emphasized by Postan (1952 pp.216-218), and they can be illustrated by specific examples, such as the city of Lübeck, where older mercantile families tended to have a larger section of their wealth held in the form of annuities than did more recently established merchants.[46] One should certainly not suggest that only merchants purchased public annuities, as there is evidence from France and the Kingdom of Naples in the sixteenth century that certain members of the nobility invested in public debt, but overall, there is no evidence of a general movement by landowners in Europe to invest in government debt. It is interesting in this regard to note that even as late as the middle of the eighteenth century, the evidence provided by Dickson (1967) and Carlos and Neal (2006) shows that in Great Britain ownership of both government debt and Bank of England shares remained heavily concentrated in the London area.

3.2 The Cost of Borrowing for City-States and Territorial States

In addition to creating debt markets at different times, once they had created a debt, European states also borrowed on widely different terms. It has often been emphasized

[45] See Grassby (1970) for an emphasis on the significance of mercantile wealth being held in liquid form in seventeenth century England.

[46] This argument that there was a general movement by merchants who earned fortunes in long-distance trade to seek low risk investments involving property and annuities was made earlier by Pirenne (1914). See the discussion in Rotz (1977) for the example of Lubeck.

that certain European states like Genoa or the Netherlands had access to cheaper finance than state such as France or Castile. But Epstein (2000) has argued that when one considers the long-run evolution of interest rates in a broad set of European states, the most prominent feature one observes is the steady downward trend in rates that occurred in all types of states. In this section I describe how the data on costs of borrowing for the 31 European states were collected, building on and extending the dataset initially collected by Epstein (2000). The cost of borrowing will provide a second important indicator of a state's creditworthiness, along with the date at which a state first established a long-term debt. Attention is restricted to interest rates on long-term debt, based on either the sale of life or perpetual annuities (the case with the majority of states) or on remunerated obligatory loans of the sort initially used by Italian city-states.

Ideally, one would have a common interest rate measure for all states considered, but this is unfortunately not feasible when considering a broad sample of states over such a long time period. For a select few states there is information on the yields for government debt on secondary markets. This can provide the closest evaluation of whether investors perceive a state as creditworthy. For a much larger set of states there is information on nominal interest rates at issue (or the effective rate of return in the case of annuities). Finally, in a number of instances existing historical work provides no direct indication of an interest rate on debt issues, but fiscal data exist that can be used to construct a proxy measure for the interest rate. This can be constructed by taking the ratio between annual debt service and the total stock of debt. While it is often not made explicit, this proxy method for reporting interest rates has actually been used by a large number of authors, including a number of the sources reported in Epstein (2000).[47] In what follows, I report interest rates based on nominal rates at issue when these are available, and based on the

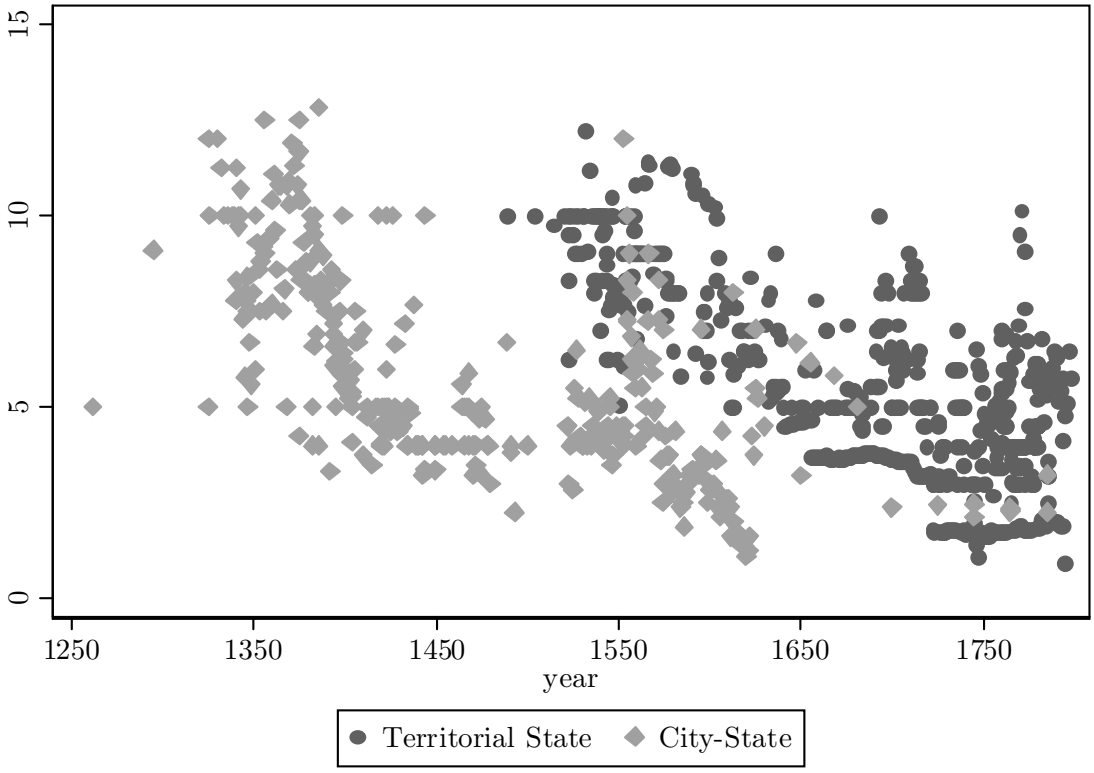
[47] One source that does discuss this method explicitly is Sussman and Yafeh (2006).

fiscal proxy when they are not. The subsequent statistical analysis in Chapter 5 will control for the type of interest rate measure used, while also taking account of the type of debt instrument.[48] In order to smooth out the effect of temporary economic, political, or market events that may in the short-run have altered the interest rate at which a state could borrow, in my statistical analysis in Chapter 5 (although not in the figures reported in this chapter) I use average interest rates over half-century periods.

Figure 2 provides an initial look at the interest rate data by graphing all annual interest rate observations by year, with observations from city-states indicated in grey and observations from territorial states indicated in black. There is clear evidence of a decline in interest rates over time. But it is also immediately apparent that within any given time period, we observe very considerable variation. In some cases differences in interest rates can be explained by the type of debt instrument, such as life annuities versus perpetual annuities. But there also remains important variation that cannot be easily explained by this difference. Figure 2 also reinforces the point that city-states in Europe began borrowing well before territorial states, and in addition city-states may have paid lower interest rates on their debts. The latter phenomenon can be seen by directly comparing rates in city-states and territorial states by period beginning in 1500. For the pre-1500 period we cannot directly compare city-states and territorial states, because no territorial states had yet created long-term debts. The problem is that we cannot observe the interest rate at which territorial states would have borrowed if they had decided to create long-term debts at this early date. The implications of this sample selection issue are considered in detail in Section 5.

[48] We would expect there to be a higher interest rate on life annuities in particular, as opposed to perpetual annuities, since life annuities paid an income stream for a shorter time period, while neither life nor perpetual annuities involved repayment of principal.

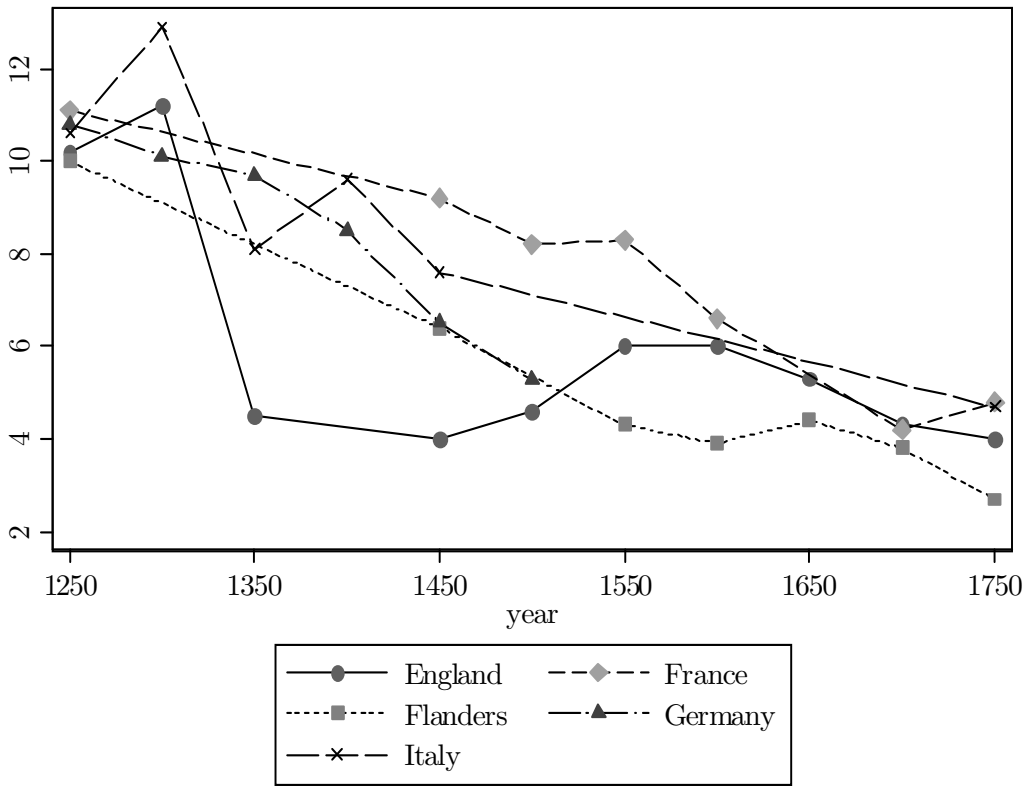
Figure 2: Interest Rates on Debts of City-States and Territorial States



Beyond drawing a simple comparison of the interest rates on public debt in city-states and territorial states, we can also attempt to compare costs of borrowing after controlling for the level of returns on investment in private markets. The best available long-run data on private interest rates in medieval and early modern Europe comes from returns on land rents. Land rent contracts involved a creditor granting a specific sum to a borrower in exchange for the right to a fixed future income stream from the borrower's land. Like the perpetual and life annuities issued by city-states, and later by territorial states, land rent contracts bore a strong resemblance to loans, but they made no provision for repayment of the "principal" and thus were less likely to fall afoul of usury restrictions. The similarity between land rent contracts and those for government annuities makes them a useful source of comparison. Clark (1988) collected extensive data for returns on land rent contracts in England between the 13th and the 18th century, and he also reports data from earlier sources covering several other European regions. The most salient feature of each of these series is the large secular decline that occurred in land rent returns over time. While the data on land rents is useful for providing a view of trends in private interest rates, this data exists only for broad regions like France, England, Germany, and Italy, and not for the multiple political entities that might have existed within such regions. As a result, it provides an imperfect proxy for interest rate differentials between individual states. Figure 3 plots data on land rent returns from five different European regions. For four of the five regions there is a steady downward trend. The exception is England for which Clark's own research suggests a spectacular drop in the return on land rents following the Black Death. Overall then, the evidence for the five regions in Figure 3 is informative and suggestive of a strong secular trend.

As a next step in the analysis, Figure 4 plots the difference between the interest rate at which the state borrowed and the best estimate of the return on land rents. To the

Figure 3: Returns on Land Rents in Five European Regions (source: Clark, 1988)



extent that there are common economic developments that affected both the return on land rents and interest rates on public debts, we should observe that changes in land rent returns were associated with one-for-one changes in interest rates on government debt. The statistical analysis in Chapter 5 suggests that this is indeed the case. Taking the difference between the interest rates on government debt and land rents provides a closer estimate of whether a particular state paid a premium to obtain finance, after controlling for economic conditions. In Figure 4 the difference between city-states and territorial states is now even more striking. While city-states, on average, borrowed at 1.5% *below* the return on land rents, territorial states, on average, borrowed at 0.5% *above* the return on land rents. Once we control for the return on land rents, we also observe that this average gap is remarkably stable until after 1750.[49]

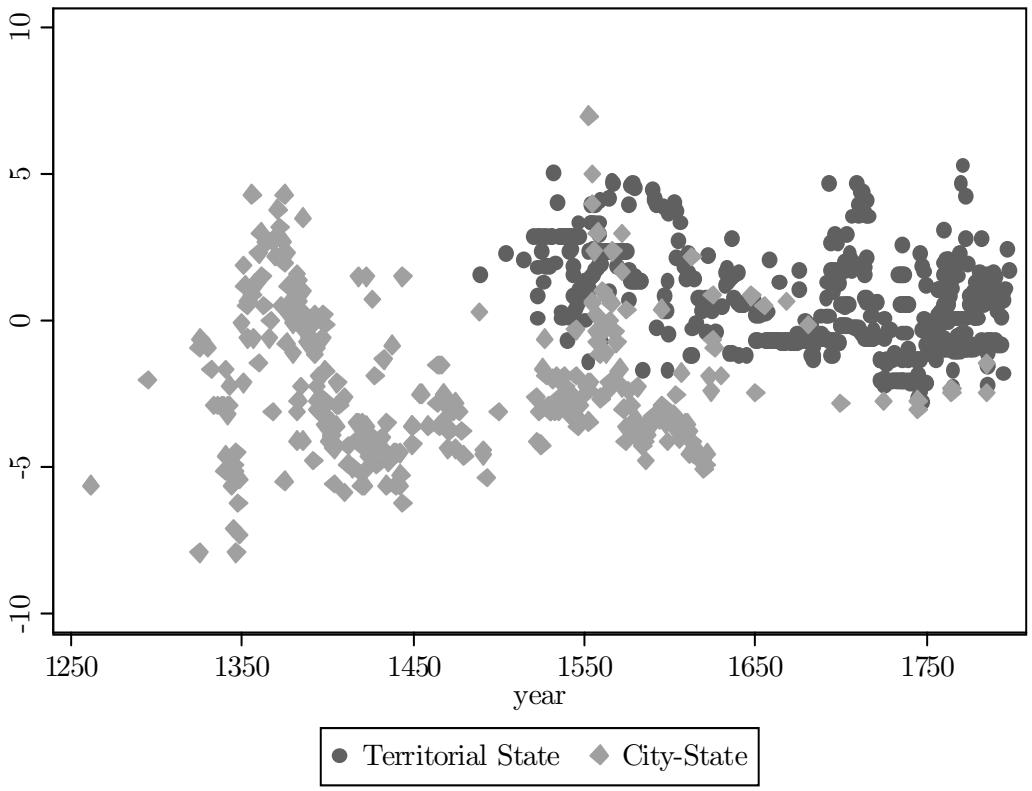
With the summary data on interest rates presented, there are three further issues to consider when asking whether the interest rates reported here accurately reflect the costliness of finance for different states at different times.

First, it is known that some governments, and especially those experiencing financial distress, sold debt below its par value. The interest rates reported here will not capture this phenomenon, so in some cases they will be under-estimated. This problem would not affect the fiscal proxy for the interest rate, however.[50] This presents an additional reason for using interest rate data based on half-century averages in the subsequent statistical analysis. However, averaging over fifty-year periods would only fully eliminate this problem if it was as common for governments to issue debt above par as to issue debt below par, and there is little indication that this was the case. In the absence of a technique that could eliminate

[49] Figure 4 does not distinguish between perpetual annuities and the life annuities initially sold by many city-states, for which we would naturally expect a higher interest rate. This accounts for a number of the relatively high interest rates for city-states prior to 1400. The statistical analysis in Chapter 5 will take account of this factor.

[50] It may be useful in this regard to note that for the overall sample interest rates measured using the fiscal proxy method were not significantly different than those based on nominal yields at issue.

Figure 4: Difference Between Interest Rate on Public Debt and Return on Land Rents



the bias created by not observing whether debt was sold below par, then it is still possible to consider whether this bias would be likely to lead to overestimating the interest rate differential between city-states and territorial states. For this to be true, it would have to be the case that city-states sold debt below par more frequently than did territorial states. The problem with this statement is that while there are known instances where city-states sold debt below par, there appear, if anything, to have been more instances of this taking place in territorial states.[51]

A second issue to consider is whether the interest rates reported here reflect the return investors on an open market would require in order to lend, or, alternatively, whether there was a degree or moral suasion of compulsion involved. There is plenty of evidence that such factors may have played a role in decisions to purchase government annuities, potentially resulting in a lower interest rate than would otherwise prevail, but this appears to have been a common phenomenon in both city-states and territorial states. We would only expect it to lead to an inaccurate conclusion that city-states had access to lower cost finance if this practice was somehow more prevalent in city-states than elsewhere. In the case of annuities issued by self-governing cities, it has frequently been suggested that given the extent to which those who managed government also often directly invested in a city's debt, in difficult times town officials served as a lender of last resort. For a city like Bruges in the late fifteenth century, Derycke (2003) has argued that purchasing public annuities may also have helped cement one's position within the city's political elite. But a review of the development of government annuities in a territorial state like France shows that such incentives were also present. They involved the pressures placed by the monarchy on venal office-holders to purchase rentes when it proved difficult to find sufficient purchasers on the open market.[52] Overall, while compulsion or moral suasion may have had an

[51] France is a very prominent example of this phenomenon. See Forbonnais (1758).

[52] See in particular Doyle (1996) and Bien (1987) as well as the material in Chapter 7 for a description of

important impact on the observed interest rate for a govern state in a given year, there is little evidence that these factors can explain the consistent interest rate differential between city-states and territorial states observed over the five hundred year period considered here.

A third and final issue to consider involves the fact that in a number of cases, cities that were largely self-governing borrowed at the behest of princely overlords. This was particularly common in the Low Countries after the middle of the fourteenth century, as Burgundian (and subsequently Habsburg) princes pressured cities like Ghent and Bruges to sell annuities to fund princely military expenditures.[53] We would not necessarily expect to observe a different interest rate on this type of loan as long as the city that had contracted it retained control of the taxes that would be used to repay the loan. As such, repayment would depend on the ability and willingness of the municipality repay. This is perhaps one explanation for the observation by Boone (1991) that the city of Ghent's financial elite profited greatly during the fifteenth century from loans used to fund transfers to the Burgundian dukes.

3.3 How Much Could States Borrow?

We would expect European states that were more creditworthy to have been able to establish long-term debts earlier than their neighbors and to be able to borrow at lower interest rates. We might also expect such states to be able to obtain access to larger quantities of finance. This observation fits well with much historical work on states like Venice or the Netherlands that were innovators with regard to public debt. States of this type are seen as having gained access both to inexpensive finance, and to resources in large quantity. Likewise, scholars who emphasize the impact of England's Glorious Revolution commonly argue that it led to both a fall in interest rates for public loans, as well as to

this phenomenon.

[53] See Boone (1990, 1991) and van Nieuwenhuysen (1984).

an unprecedented expansion of the quantity of finance available to the British Crown.[54] However, the theoretical model developed in Chapter 2 suggests that the prediction of a tight correlation between loan quantities and political regime should be made with caution, because the quantity borrowed by a state may be determined either by the ceiling imposed by its creditors or by a state's preferred level of borrowing if it is below this ceiling.

While there is evidence for each of the 31 states I consider on the date for creation of a public debt and on costs of borrowing, information on the total stock of public debt is much more difficult to obtain. In a number of states the manner in which archives were organized and have survived makes it possible to document the date and characteristics of initial loan issues, but it does not facilitate attempts to put together an overall picture for the stock of public debt. Drawing together information from a range of sources, I have been able to put together an estimate of the total stock of debt as a multiple of annual revenues for 14 of the 31 states in the sample. Ideally, we would like to be able to directly observe the credit ceiling that would be imposed on a state. Political conditions might have helped make this ceiling higher in city-states. For states that chose to borrow up to their credit ceiling, the total stock of debt would provide a direct measure of this ceiling. For states that did not make this choice, the total stock of debt would not provide an accurate indication of the ceiling. The problem, of course, is that we have no way of knowing with certainty which of these two categories a given state would fall under.[55]

Table 2 lists the maximum recorded debt as a share of annual revenues for each of the fourteen states, considered for different centuries, listed in chronological order by the date of their observation. There is little evidence here that states commonly presented as being

[54] This would be true in particular of North and Weingast (1989) and of Robinson (1998).

[55] Eaton and Gersovitz (1981) deal with this problem empirically by estimating a disequilibrium model following the method proposed by Quandt. However, it would be a challenge to econometrically identify such a model given the data available for medieval and early modern Europe.

financial success cases were able to borrow more than their counterparts. So, for example, Holland in the seventeenth century and Great Britain after 1688 were able to borrow very large amounts, but this was also the case with the French monarchy during this same time period.[56] When one takes a closer look at accounts of public finance in these individual countries, however, there are strong indications that by 1715, the French monarchy had reached a point where it was having increasing difficulty raising new finance, while this was not the case for either Great Britain or the Netherlands.[57] The one thing these data do seem to indicate is that states in later centuries, and particularly after 1700, were able, on average, to obtain more credit than those before.[58] One of the contributing factors would have involved the secular decline in interest rates over the five centuries considered here. If the interest rate on government debt fell as a result of a decline in the risk-free return to capital, then this would imply that a state could borrow a larger amount (as a multiple of current revenues) without increasing the share of current expenditures required for debt servicing.

3.4 Economic Explanations for City-States' Financial Advantage

I have emphasized that city-states began to borrow significantly earlier than territorial states, and that city states also enjoyed a persistent advantage over territorial states in paying lower interest rates on their debts. Even if territorial states became more dominant

[56] Carlos, Neal, and Wandschneider (2006) remark that the War of the Spanish Succession (1702-1713) resulted in a dramatic increase in the stock of debt for all four major European powers involved (France, Great Britain, Austria, and Spain).

[57] See Forbonnais (1758) on the French case. This statement holds for Great Britain with the exception of a brief period of economic and political crisis associated with a Tory election victory in 1710. See Dickson (1967) and Stasavage (2003).

[58] Though France in the early eighteenth century was able to borrow a similar amount as Holland and Great Britain when measuring debt as a multiple of annual revenues, a different conclusion would result from comparing debt in per capita terms, because of the lower level of per capita taxation in France. This is ultimately a less relevant measure, however, for examining the ability of a state to borrow given its current level of revenues.

in Europe after 1500, once they did establish long-term debts they often paid a premium on their debt. One reaches the same conclusion when comparing territorial states like France and Castile with either city-states from the pre-1500 period or with city-states that survived and continued to borrow after 1500. So far, however, I have not presented any evidence to suggest why city-states enjoyed this financial advantage. The core argument of this book is that the financial advantage of city-states depended on the structure of their representative institutions, but more fundamentally on the fact that these polities were small and that a significant fraction of their political elite held liquid wealth. Before using the subsequent chapters to present the evidence in favor of this argument, it makes sense to first consider whether one could account for the observed difference between city-states and territorial states by referring exclusively to economic conditions. The most obvious possibility is that city-states established debts earlier and borrowed on better terms for the simple reason that they existed in areas with greater concentrations of liquid wealth. One reason to believe otherwise is that the interest rate differential between city-states and territorial states continues to be observed even after using the best available control for the level of private interest rates, as shown in Figure 4. The statistical tests in Chapter 5 will show that the interest rate differential between city-states and territorial states remains significant even when using a number of additional controls for economic development including the level of urbanization. In Chapter 5 I will also demonstrate that these proxies for economic development cannot account for the earlier establishment of long-term public debts by city states.

If the financial advantages enjoyed by city-states cannot be explained simply by the fact that they existed in more developed areas, a second possibility is that city states could borrow more easily because they found it less costly to raise tax revenues. Many of the "revolutions" in public borrowing that occurred in European territorial states like

Great Britain and the Netherlands were preceded by reforms and improvements in revenue collection.[59] Less has been written about the importance of revenue collection in city-states, but a number of authors have made the plausible argument that city-states benefited financially from the fact that they could easily tax trade and consumption within their boundaries.[60]

The problem with the above argument is that it is also the case that a number of the largest territorial states in the sample - including Castile, France, and England had at least one large city that was a center of trade from an early date and that would eventually also become a financial center. Even if these territorial states in earlier centuries found it costly to extract revenues across their entire territory, it is not clear why they could not have created long-term public debts at an earlier stage, based on taxes collected in their capital city or in a select number of large cities. Relying on large cities as sources of debt finance was in fact the strategy that France and Castile did eventually adopt, but not until the beginning of the sixteenth century.

A third economic explanation for the financial advantage enjoyed by city-states is that they had access to more *stable* sources of revenue. The theoretical model in Chapter 2 provided a simple mechanism through which states that are less subject to exogenous shortfalls in revenue should be able to borrow at lower interest rates, because there will be a lower probability of involuntary default. It might have been the case that the revenue sources upon which cities relied were inherently less volatile than the revenues of territorial states that derived to a lesser degree from commerce. Revenue volatility should also logically have depended on the extent to which a state had a diversified set of revenue sources. Merchants in city-states often had trading partners in a variety locations, which

[59] See t' Hart (1993), Tracy (1985), and Fritschy (2003) on Holland, and O'Brien (2001) and Brewer (1989) on Great Britain.

[60] Finer (1995 vol.1 p.19) is an example here.

Table 2: Maximum Debt to Revenue Ratio Observed for Different States

State	**Debt to revenues**
Florence (1427)	19.6
Holland (1714)	19.5
France (1715)	17.0
Bruges (1298)	13.6
Castile (1550)	11.0
England (1748)	10.6
Venice (1503)	9.7
Austria (1763)	8.1
Papal States (1599)	8.1
Basel (1503)	7.2
Douai (1400)	5.5
Genoa (1380)	5.4
Nuremberg (1406)	4.5
Denmark (1763)	2.6

Table 3: Revenue Volatility for Different States

State (cities in bold)	**Standard deviation revenues**
Basel (1501-1611)	0.12
Holland (1599-1797)	0.13
Florence (1402-1430)	0.13
Denmark (1731-1771)	0.14
Douai (1392-1493)	0.20
Castile (1369-1396)	0.21
France (1322-1344)	0.22
France (1600-1754)	0.23
England (1600-1789)	0.31
Siena (1286-1349)	0.34
England2 (1485-1599)	0.42
Ghent (1336-1347)	0.37
England (1327-1345)	0.62

would imply lower volatility. But it is also known that some city-state economies were highly dependent on trade with a single partner for their economic well being. This was the case with the Flemish cities of Bruges and Ghent, which during the fourteenth century depended heavily on the wool trade with England.

One way to consider the above issue is to investigate the relative volatility of revenues in different types of European states. Table 3 gives a summary measure of revenue volatility in ten European states, two of which (England and France) can be considered for separate time periods. The table reports the standard deviation of revenues after first regressing the level of revenue on a time trend and standardizing the means of the different series to zero. De-trending here is a simple way of distinguishing between the effect of anticipated trends and unexpected changes.[61] There is little indication in this data that city-states had notably less volatile sources of revenue than did territorial states. The city of Basel and the province of Holland (itself resembling a league of cities) had the lowest levels of volatility according to this measure, but other cities including Ghent and Siena had more volatile revenues than did several larger territorial states.

3.5 Summary

An investigation of the evolution of public credit over five centuries suggests that city-states had a significant financial advantage when compared to territorial states. City-States for the most part established long-term debts during the thirteenth and fourteenth centuries, whereas it was not until a new period of intensified warfare after 1500 that territorial states moved to establish long-term debts. When territorial states did begin to borrow, they faced higher costs of borrowing than did city-states, and there is little evidence of a general convergence in interest rates between these two types of states until potentially

[61] Ideally one would be able to find a measure of exogenous sources of revenue volatility, since part of the volatilily may have depended on state policies.

after 1750. An initial look at economic factors involving private interest rates and revenue developments suggests that these alone cannot explain the observed difference between city-states and territorial states, a subject that will be considered more formally in Chapter 5. Perhaps the most important thing to emphasize here is that while cities may have had abundant capital and found it easy to raise taxes, European territorial states also had major cities within their domains that should have enjoyed the same advantages. The crucial difference is that these latter cities were not politically independent.

4 Representative Assemblies in Europe, 1250-1750

So far I have suggested that city-states enjoyed an advantage over territorial states when it came to public credit, and I have argued that it seems difficult to explain this advantage by referring exclusively to economic factors like levels of private interest rates or sources of revenue. I have not considered the alternative possibility, suggested in Chapters 1 and 2, that access to credit depended on the structure of representative institutions in different European states. Chapters 4 and 5 take up this task. In Chapter 4 I provide an overview of the emergence of representative assemblies and the financial role that they played. Numerous historical sources provide evidence of a sharp distinction between the financial role played by representative bodies in city-states and territorial states. Within city-states, representative bodies met frequently, they played a direct role in controlling government finance, and crucially, they were often controlled by individuals who themselves invested in government annuities. This was a general phenomenon covering independent cities in Italy, The Low Countries, Germany, and other regions. Within territorial states, representative assemblies at times had significant prerogatives, particularly with regard to taxation. But it was rare for assemblies in territorial states to meet frequently, and when they did meet, there is little evidence that state creditors enjoyed a prominent position within them. In some cases representative assemblies were even an obstacle to a government's efforts to obtain credit. The two well known exceptions to the above trend are the Netherlands, a state which bore many resemblances to a league of cities, and that of England after the Glorious Revolution of 1688.

In order to provide more systematic evidence for the trends suggested above, I have collected data on the presence and prerogatives of representative bodies in each of the 31 European states considered in the previous chapter. This includes information on whether a representative assembly existed, whether it had veto power over taxes, whether

the assembly played a role in administering taxes, and finally whether it also had direct control of government debt issues. I also report information on the frequency with which representative bodies met. This is based on the idea that in order for such bodies to engage in active monitoring of public finances, they would need to meet frequently. The results of this effort support the initial contentions of the chapter about differences between city-states and territorial states, but they also point to fascinating variation within the group of territorial states. Below I will present evidence to show that part of this variation within the group of territorial states can be explained by differences in geographic size.

4.1 Origins of Representative Assemblies

Historical accounts of representative assemblies in medieval Europe emphasize two causal mechanisms that led to the emergence of these bodies, both of which may have operated within a given state at a given time. The first involved spontaneous action by social groups seeking recognition from a prince. The second involved efforts by princes to establish assemblies as a means of securing finance and obtaining support for foreign policy.[62]

The first mechanism involved spontaneous efforts by different groups in the period after 1200 to organize and obtain recognition from princes, thereby breaking with the feudal system that was based on individual ties between lord and vassal. Georges de Lagarde (1937, 1939) referred to the period between 1200 and 1500 as the "corporatist age", with the new corporate groups separated by social category rather than territory. According to the "corporatist" interpretation of medieval representation, the emergence of assemblies depended on a waning of princely authority in the period between 1200 and 1400. Princes found themselves faced with cities that had spontaneously organized, a clergy that had organized, and pressures from organized groups of feudal barons. The best

[62] The distinction between these two mechanisms has been emphasized by Blockmans (1997).

known example of the latter phenomenon involves the Magna Carta of 1215 in England, but very similar events took place elsewhere in Europe at this time. In a number of German principalities nobles and leaders of towns formed confederations, or *einungen*, to protest against princely abuses of power. This led subsequently to the development of more regularized assemblies.[63] Lousse (1943) suggests that representative assemblies in territorial states had their origins in the curia, a body composed of all the vassals of the prince. During the twelfth and thirteenth centuries cities were given representation in these bodies, followed subsequently by councils of bishops.[64] It has been suggested that the mechanism through which these different groups established assemblies was similar to that taken by trade unions in the early twentieth century - groups first established a *de facto* existence by overcoming barriers to collective action and holding assemblies. Subsequently they obtained formal legal recognition by princes. It was as a part of this movement that a wide set of European cities obtained status as legal entities unto themselves. Subsequently, a number of cities established a high degree of *de facto* or *de jure* independence, with the emergence of Free Imperial Cities in Germany and parts of what is now Switzerland, independent cities in Northern Italy, and a large number of towns in the Low Countries. It should be emphasized that the "representation" referred to here involves individuals who represented a specific corporate group (town, clergy, nobility, or in a few cases the peasantry), not the individuals of a nation as a whole.

The second mechanism through which representative assemblies emerged was through the deliberate efforts of princes seeking both finance and support for foreign policy initiatives. It is widely argued in both recent and earlier scholarship that princes consented to have representative assemblies, and to hold them more frequently, when they were in

[63] See the description in Folz (1966).

[64] See Lousse (1943 pp.242-245). He cites dates for introduction of cities in assemblies as 1136 for the Diet of the Kingdom of Italy, 1188 for the Castilian Cortes, 1207 for the Papal States, 1263 in the French concilia, and 1265 in the English Parliament.

a weak financial position, because they could best obtain new tax revenues with the support of a representative assembly. One finds this argument in the writings of authors like Lousse (1943), and in the more recent work Hoffman and Rosenthal (1997), Bates and Lien (1985), Levi (1988) or Finer (1997 II ch.8) to mention but a few examples.[65] Though this motivation is less frequently cited, in some instances princes also convened assemblies to strengthen their hand in external conflicts, as was the case with Phillip the Fair's decision to convene an Estates General in France in 1302 in anticipation of a conflict with the Papacy.[66] Finally, many of the earliest assemblies in European territorial states were often military meetings convened by rulers, providing yet another mechanism for their establishment.[67]

While there is not general agreement why this was the case, it is very widely argued that what de Lagarde (1937) calls the "age of the territorial state" (beginning in 1500) witnessed a marked waning in the powers of representative assemblies across Europe. One interpretation is to see this as a gradual and exogenous increase in the rise of absolutism. A variation on this argument, advocated by Downing (1992), is that the post-1500 revolution in military technology increased imperatives for states to obtain finance, and representative assemblies actually presented obstacles to satisfying this objective. As a consequence, European territorial states, and particularly those in the most geographically exposed positions, established new bureaucratic mechanisms for raising revenue that bypassed existing assemblies.[68]

[65] It is also possible to make the alternative argument that rulers who succeeded in establishing a strong representative assembly in their territory, as was the case with England from an early date, found it easier to raise revenue and strengthen their financial position. See in particular Ormrod (1995) and Boucoyannis (2006) on this point.

[66] While this is often presented as the date for the first meeting of France's national representative body, it was not actually formally referred to as the "Estates General" until considerably later. See the interesting discussion of the political context for the 1302 meeting in Decoster (1302).

[67] This point has been made forcefully by Bisson (1966).

[68] Ertman (1997) also emphasizes the effect of geographic proximity to conflict zones.

The above accounts of the development of representative institutions focus on the temporal variation between an early age (pre-1500) where assemblies were widespread and influential, and a second era after 1500 where princes increasingly asserted control. Another theme in historical work on the origins of representative government focuses specifically on the role of city-states as pioneers. Authors as diverse as Pirenne (1910, 1925), Guizot (1838), Weber (1921), Sidgwick (1903), Reynolds (1984), Van Werveke (1963) and Finer (1995) all emphasize the extensive development of representative institutions within medieval city-states. These same authors also emphasize the important role played by merchants within city-states. The relatively closed group of merchants that controlled politics in many medieval city-states has often been referred as a "patriciate" by historians.[69] However, these authors do not necessarily share the same interpretation of this phenomenon. Guizot (1838) emphasized that the bourgeois within city-states were the forefathers of the French revolutionaries of 1789. In contrast, Pirenne (1910) and the numerous historians inspired by him emphasize how representative government in medieval city-states often involved an oligarchic form of rule, coupled with very high levels of inequality.

While a large number of authors emphasize the early and extensive development of a representative style of government within city-states, this leaves open the question why city-states would be so different from territorial states in this regard. One simple but powerful explanation can be drawn from Blockmans (1978, 1997) who emphasizes the importance of distance as an obstacle to frequent meetings of representative bodies in pre-modern Europe. Given pre-modern costs of travel, this is something that was arguably easier to achieve on a sustainable basis in smaller polities. Spufford (2002 ch.4) suggests that the European road network reached its nadir during the twelfth century. From this point a series of

[69] For an extended discussion of this term and its meaning as applied in the medieval context (as opposed to the original Roman context) see Van Werveke (1963).

improvements occurred during the thirteenth and fourteenth centuries, but it was not until the eighteenth century - the end of the period considered in this study - that major road improvements involving paved roads took place in many countries.[70] In this context of difficult transport there was an obvious difference in size between self-governing cities on one hand and territorial states on the other. Within even the largest city-states (focusing on the size of the core city) costs of travel to an assembly must have been negligible, and ability to coordinate with other participants must have been commensurately higher. Work by historians refers to the fact that towns concentrated numerous individuals in a small space, and this same work also regularly emphasizes how this facilitated existence of an active representative assembly.[71] Within city-states meetings could often be convened by the simple sounding of a bell or by town crier. Likewise, groups that sought to assemble for a protest could coordinate their actions by banging on objects like metal bowls or pots.[72] At the regional level, authors have argued that in geographically compact areas where cities were clustered closely together it was possible to sustain intensive representative activity between groups of cities, as has been emphasized by Blockmans (1976) for the case of Flanders and Tracy (1990) for the case of Holland.

In strong contrast, references to distance in territorial states often refer to the obstacles this posed for sustaining an active representative assembly. Because of both its geographic size and its historical prominence, one sees this argument referred to most frequently for the case of France.[73] The Hanseatic League provides another instructive example, because

[70] See Langford (1989 ch.9) for a description of this eighteenth century transport revolution in Great Britain which was driven in particular by the development of Britain's turnpike network.

[71] See Reynolds (1984) pp.164-165 on this point.

[72] One such episode from 1301 is recounted in the *Annals of Ghent* a contemporary chronicle translated from Latin by Johnstone (1986).

[73] See Reynolds (1984 p.312), Ertman (1997 p.93), and Blockmans (1997). The idea that distance was a fundamental obstacle to maintenance of an active representative assembly in France has been questioned by Lewis (1962) and Bouyocannis (2006) who argue that French towns regularly sent delegations to Paris and French nobles often held residences in the city. However, the argument is not that the large size of France prevented such individuals from traveling to Paris, but that distance made this effort more costly

it was actually a league of independent cities rather than a conventional territorial state. It was a polity that was dominated by merchants, but it was also a far-flung entity that, because of its geographic dispersion, faced difficulties in maintaining a central representative assembly that would be regularly attended. Dollinger (1971 p.94) notes that the League's general assembly, the *Hansetag*, suffered from chronic absenteeism caused in part by "the desire to avoid the cost of sending a representative". This is particularly interesting given that trade routes were of course well established between the major Hanseatic cities. We can also gain insight into the effect of distance on representation in territorial states by comparing representative assemblies in Castile and the Low Countries, two areas where representative assemblies were comprised a league of cities. Koenigsberger (1992) suggests that in comparison with assemblies in Flanders and Holland, the geography of Castile presented significant obstacles to holding frequent meetings of representatives. Under these conditions, the alternative of holding a standing committee of representatives was an alternative, but Blockmans has argued that standing committees tended to become "captured" by a central authority.[74] As I will discuss at length in Chapter 7, the Cortes of Castile presents an example of precisely this phenomenon.

The importance of distance in conditioning possibilities for representative activity may also help explain two other important differences between assemblies in city-states and territorial states. Attendance at territorial state assemblies was initially seen as a duty rather than a privilege. Consider the medieval English Parliament for which Pitkin (1967 p.3) suggests that "Far from being a privilege or right, attendance at Parliament was a chore and a duty, reluctantly performed."[75] One plausible reason for making parliamentary attendance a duty (and the same pattern occurred in other medieval assemblies) is

relative to the expected gain from attending an assembly.

[74] Blockmans (1978 pp.197-198).

[75] On the context for Knights' attendance in medieval English parliaments see Wood-Legh (1932).

that representatives would otherwise have chosen not to attend. In city-states, in strong contrast, one sees constant reference to battles over who would be awarded the privilege of being represented, and there is no indication of reluctance to participate. Another feature of representative assemblies in territorial states, which is absent in city-states, is that representatives were often paid to attend and in some cases this payment was indexed according to the distance they had to travel.[76] These costs were certainly not negligible, as Major (1955) reports that the French crown spent 50,000 livres tournois indemnifying the deputies to the Estates-General of 1484.

4.2 Prerogatives of Representative Assemblies

To attempt to provide a systematic overview of the development of representative assemblies, I have collected data on the existence, and prerogatives of representative bodies in the same set of 31 European states for which I have data on the development of public credit. The assemblies of the largest European states, such as France, Castile, and England, have been well documented, as have the assemblies of a number of the most prominent city-states. In other cases a more limited number of sources is available. In compiling this work I have found an invaluable set of sources in the different studies published by the Société Jean Bodin, a historical society based in Belgium that since 1935 has promoted work on the study of law and institutions. In 1954 and 1955 the Société published two volumes on the administrative, economic, and social institutions of cities, with a heavy emphasis on the experience of self-governing cities in pre-modern Europe.[77] In 1965, 1966, and 1969 the

[76] See Major (1955) on the French Estates-General, Duarte (2003) on the Cortes of Portugal, and Annas (2004) for costs of attendance of the Imperial Reichstag.

[77] *La Ville: Première Partie, Institutions Administratives et Judiciaires, Recueils de la Société Jean Bodin*, vol.6, Editions de la Librairie Encyclopédique, Bruxelles, 1954. *La Ville: Deuxième Partie, Institutions Economiques et Sociales, Recueils de la Société Jean Bodin*, vol.7, Editions de la Librairie Encyclopédique, Bruxelles, 1955.

Société published collected volumes on the theme of "Governors and Governed".[78] These include a wealth of individual studies focusing on the representative institutions of different states. In addition to relying on the studies published by the Société Jean Bodin, I have also consulted a large number of additional studies including those published under the auspices of the International Commission for the History of Representative and Parliamentary Institutions. The goal of this exercise in quantification is not by any means to imply a degree of exactness; it is instead to attempt to provide an overview that will be useful for establishing broad patterns in the evolution of representation across countries and over time. In consulting the above works I have focused on four specific questions involving the presence and prerogatives of a representative body. The response to each question is coded as a dummy variable with 1 for "yes" and 0 for "no". A "yes" response to the four following questions involves a progressively greater role for a representative body in taking decisions related to public credit.[79] As such this can help distinguish between assemblies that could not serve as effective monitors, assemblies that could engage in passive monitoring by levying *ex post* sanctions on executives, and finally assemblies that could engage in active monitoring by directly influencing policy decisions to avoid a default occurring in the first place.

1. *Is there a representative assembly?* This condition is satisfied if there is a collective

[78] *Gouvernés et Gouvernants: Quatrième Partie, Bas Moyen Age et Temps Modernes (II), Recueils de la Société Jean Bodin Pour L'Histoire Comparative des Instituitions*, vol.25, Editions de la Librairie Encyclopédique, Bruxelles, 1965. *Gouvernés et Gouvernants: Troisième Partie, Bas Moyen Age et Temps Modernes (I), Recueils de la Société Jean Bodin Pour L'Histoire Comparative des Instituitions*, vol.24, Editions de la Librairie Encyclopédique, Bruxelles, 1966. *Gouvernés et Gouvernants: Première Partie: Synthèse Générale, Civilisations Archaïques, Islamiques, et Orientales, Recueils de la Société Jean Bodin Pour L'Histoire Comparative des Instituitions*, Editions de la Librairie Encyclopédique, Bruxelles, 1969.

[79] In coding information on representative assemblies in territorial states I have not attempted to distinguish between the two ideal-types of the two chamber assembly and a tricurial assembly of estates. This distinction was emphasized by Hintze (1931) and forms a key part of the argument in Ertman (1997). However, Blockmans (1978) argues that the diversity of forms of representation in medieval and early modern Europe makes this dichotomization, even as an ideal-type, far less useful than Hintze had believed.

Table 4: Sources on Representative Institutions

State	Sources
Arras	Dumont and Timbal (1966), Bougard (1988)
Austria	Dickson (1987), MacHardy (2003)
Barcelona	Rius (1955), Corteguerra (2002)
Basel	Gilliard (1965), Gilomen (2003), Schib (1954), Liebeskind (1939)
Bologna	Carniello (2002), Jones (1997)
Castile	Marongiu (1968), Thompson (1982, 1994), Beneyto (1966), Ucendo (2006)
Cologne	Dollinger (1954, 1955), Schneider (1954), Knipping (1894, 1898)
Denmark	Lonnroth (1966), Jespersen (2000), Graves (2001)
Dordrecht	Feenstra (1954), Tracy (1985), 't Hart (1994)
Dortmund	Dollinger (1954, 1955), Schneider (1954)
Douai	Espinas (1902), Dumont and Timbal (1966), Gilissen (1954)
England	Marongiu (1968), Hayton (2002), Keir (1938), Stasavage (2003)
Florence	Finer (1995), Rubinstein (1966)
France	Major (1960), Dumont and Timbal (1966), Mousnier (1966), Soule (1965)
Geneva	Gilliard (1965), Liebeskind (1939)
Genoa	Epstein (1996), Fratiannni (2006), Heers (1961)
Ghent	Van Werveke (1946), Pirenne (1910), Blockmans (1999)
Holland	Gilissen (1966), Grever (1982), Koenigsberger (2001), Israel (1995)
Leuven	Gilissen (1954)
Mainz	Dollinger (1954, 1955), Schneider (1954)
Milan	Epstein (1993), Belfanti (2001)
Naples	Marongiu (1968), Koenigsberger (1977)
Nuremberg	Dollinger (1954, 1955), Schneider (1954)
Papal States	Partner (1980), Marongiu (1968), Caselli (2003)
Piedmont	Marongiu (1968), Koenigsberger (1971)
Siena	Bowsky (1970, 1981)
Tuscany	Koenigsberger (1977)
Venice	Lane (1973)
Vicenza	Jones (1997)
Württemberg	Folz (1966), Carsten (1966), Wilson (1992)
Zurich	Gilliard (1954), Schib (1954)

body at the level of the state that had at least a consultative role in decision-making.[80] In addition, the assembly or body must have met at least once during the fifty year period in question. City-states often had multiple assemblies, with a more restricted assembly that managed day to day affairs, as well as a larger assembly that met less frequently but with larger membership. I have coded as "yes" all cases where there was a collective executive that was accountable in some way to a broader assembly. We can expect that the existence of a representative assembly might facilitate efforts by government creditors to monitor state finances and to levy sanctions on rulers that defaulted. In coding states according to this first criterion I have attempted to distinguish between assemblies that were purely isolated events, such as a one-off meeting called to sanction a royal succession, as opposed to bodies that had some regular aspect, even if they did not meet frequently.[81]

2. *Is there a representative assembly the consent of which is necessary in order to levy taxes?* This is a more restrictive classification for representative institutions. We would expect that an assembly with veto power over taxes could use this power to sanction a ruler who defaulted on a debt, an action that would fall within the rubric of passive monitoring. The distinction between assemblies of which the consent was required to pass new taxes and assemblies that did not play such a role is important, because it is known that a number of pre-modern assemblies were restricted to a largely ceremonial role. It should also be emphasized that in many cases there is no perfectly observable demarcation between an assembly that had a strictly ceremonial role and a body that could exercise some veto power.[82]

[80] It would be more general, and perhaps more appropriate here to refer to "representative bodies" as is done by Blockmans (1978) rather than "representative assemblies".

[81] See Marongiu (1968 p.46) on this distinction.

[82] Bisson (1992) has emphasized the celebratory elements of medieval assemblies and their slow evolution towards more deliberative bodies.

3. *Is there a representative assembly that has a prominent role in administering taxes?* This distinguishes between cases where the consent of a representative assembly was required to raise taxes but where taxes were collected by agents of a prince or executive, as opposed to cases where a representative assembly decided whether to approve taxes and it also played a direct role in tax collection. It was common in pre-modern Europe for representative assemblies to play this type of role, given the relative weakness or absence of state bureaucracies to which the task of collection could be delegated.[83] Such assemblies would fall under the rubric of passive monitoring to the extent they could use their tax powers to levy *ex post* sanctions. They might also be able to engage in active monitoring to the extent that the power to administer taxes would mean the power to take corrective actions with regard to revenue collection so as to avoid defaults.

4. *Is there a representative assembly that directly controls decisions regarding spending and over issuing and repaying debt?* Representative assemblies with the most extensive financial privileges played a direct role in spending decisions, as well as in decisions regarding public credit, with the assembly's approval necessary for a new loan to be issued or annuity to be sold. Assemblies satisfying this requirement would most clearly fall under the rubric of active monitoring, as their prerogatives would allow them to take *ex ante* actions to avoid default from taking place.

I begin the presentation of the data on representative assemblies by considering their evolution over time. The data are presented in terms of individual countries each considered over separate fifty year periods from 1250 to 1750. For each of the four above questions, Figure 5 plots the percentage of states with a "yes" response for each of the

[83] As noted in the interesting article by Herb (2003), in this way pre-modern assemblies were fundamentally different than those that exist today.

Figure 5: Evolution of Representative Institutions over Time (average values)

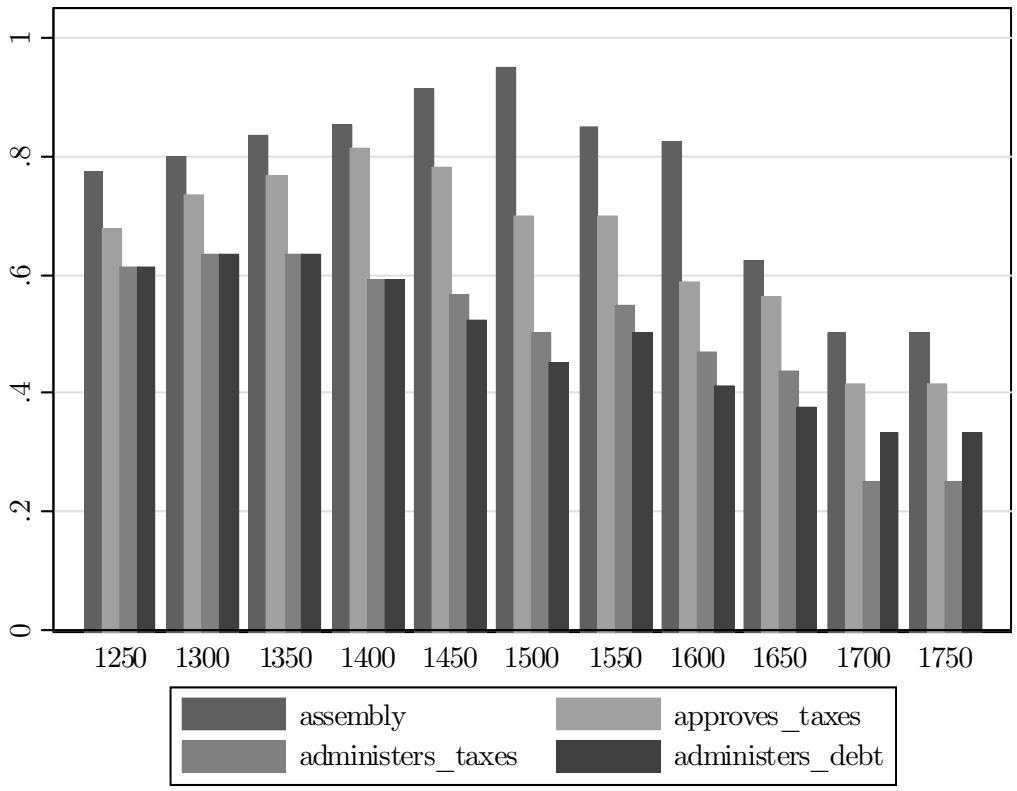
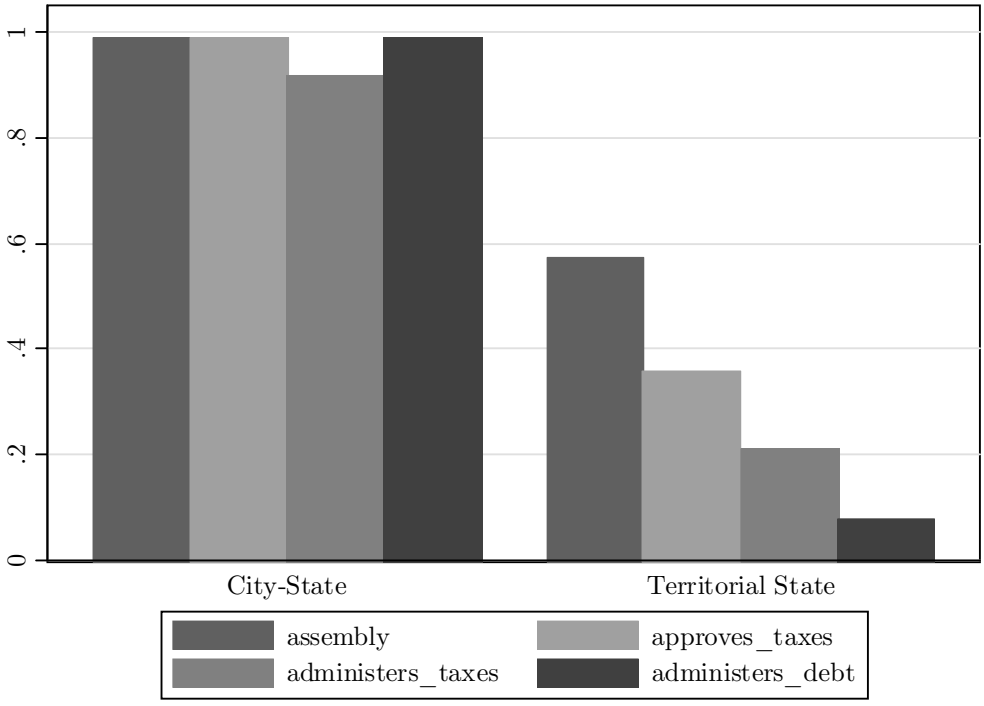


Figure 6: Representative Assemblies in City-States and Territorial States (averages)



fifty-year time periods from 1250 to 1750. For each of the 31 states under consideration Table 4 then provides a list of the sources upon which the coding is based. One can see in Figure 5 that for each of the four criteria, there is evidence of a greater role for assemblies in the "corporatist age" between 1250 and 1500 than in the period after 1500. This trend is apparent irrespective of whether one asks the simple question of whether an assembly existed or whether it had more significant prerogatives. It is particularly interesting in this regard to consider this fact in light of the evidence in Chapter 3 on the development of public credit. It suggests that the period after 1500, where most states that had not already done so moved quickly to establish a long-term public debt, was also a period where there was a general waning in the strength of representative assemblies in Europe. It should be noted, though, that the observed time trend in Figure 5 is also influenced by the fact that there are more city-states in the sample for earlier centuries, and city-states tended to have assemblies with strong prerogatives.

Independent of trends over time, the data also point to striking differences between the prerogatives of representative assemblies in city-states and territorial states, as well as to sizeable variation within the group of territorial states. Figure 6 presents summary statistics for the four characteristics pooling together all time periods but differentiating between city-states and territorial states. A sizeable portion of territorial states had assemblies, but many of these assemblies had a relatively weak role with regard to finance. In contrast, almost all city-states had an assembly and almost all assemblies in city-states had very significant control of finance, including direct control of public credit. The only real significant variation within the group of city-states is due to the Genoese republic where after 1407 revenue collection was controlled by the Casa di San Giorgio.[84] A second

[84]The Genoese case will be considered in detail in Chapter 6. Note, if we adopted a stricter coding rule for city-states based on whether a city's general assembly (and not just a collective body accountable to this assembly) had a specific prergoative, the percentage of city-state observations coded as "1" for each category would be lower. However, there would still be a very large difference in the averages for city-states

source of variation is also apparent. When we examine data for territorial states in Figure 6, it is clear that there is very significant variation within this category. While the fraction of territorial states that had assemblies that directly administered debt was very small (this was only the case of Holland, Great Britain after 1688, and Württemberg) in roughly half of the territorial state cases (again considered in terms of country half-centuries) there was at least some regularized assembly, and in a significant fraction of these cases the consent of the assemblies was required to create new taxes. This suggests that while very few territorial state assemblies can be described as having engaged in active monitoring with regard to public debt, this does not immediately imply that these assemblies were therefore in a weak political position. Assemblies that did not have a direct purvey over spending and debt could still present serious constraints on a monarch as was the case, for example, with the Cortes of Castile as will be discussed in Chapter 7. Since such assemblies existed as constraints to the extent that a monarch needed to seek their approval in order to levy new taxes, their power did not necessarily depend on meeting frequently.

Though the responses to the four above questions about prerogatives are helpful in producing a broad classification of representative assemblies in Europe, it is also worth asking whether they are consistent with more detailed evidence regarding the existence and functioning of representative bodies in specific European states. This is a subject that will be considered at length in the case studies in Chapters 6 and 7 of this book, but it is also worth presenting supporting evidence at this stage. This evidence will also be helpful in pointing to common features of the above assemblies that go beyond the five above questions.

A first observation regarding city-state assemblies is that we know that in cases such as Cologne and Siena they often developed quite intricate systems for managing public

and territorial states.

debt. This obviously would have been critical if representative bodies in these states were to engage in active monitoring on behalf of creditors. So, for example, Schneider (1954) refers to the system developed in Cologne where ruling magistrates used three separate treasuries and an elaborate system of revenue collection. This system will be described at greater length in Chapter 6. Though Siena relied on forced loans or prestanza as a principal source of borrowing, rather than the sale of annuities, the Sienese financial system under the rule of the Nine (1287-1355) provides another prime example of a sophisticated system for the collection and management of revenues, as has been demonstrated most clearly by Bowsky (1970), as will be considered in Chapter 6. Though city-states certainly varied in the sophistication of their financial procedures, there is no reason to think that Cologne and Siena were exceptions. One reason why city-states were able to develop sophisticated systems for the management of public credit is that they could imitate and adopt techniques developed by merchants for private transactions.[85] It should be remembered, however, that territorial states with large commercial cities should also logically have been able to take advantage of the same opportunity. So the existence of private commerce alone does explain why assemblies in city-states engaged in active monitoring of public finances while those in territorial states did not.

A further point regarding city-state assemblies is that the fact that they engaged in active monitoring of public credit should not be taken to imply that information about the state of public finances was always transmitted to a broad segment of the population. More commonly than not, it appears that the small groups that exercised power within city-states, and who also often owned public annuities, sought to keep information about public finances hidden from public view. One obvious motivation for this is that while those who owned public annuities had information about public finances to the extent that

[85] This is suggested by Schneider (1954) for the case of Cologne.

they themselves held senior magistrate positions, information about levels of indebtedness (and the future tax burdens that it implied) could raise protests from the broader social groups. These groups paid the taxes on common consumption goods that were often the primary basis for servicing annuity obligations. When members of the broader population within city-states sought to acquire greater representation in municipal government, they often also demanded greater publicity regarding the state of municipal finances.[86] In other words, if city-states enjoyed a financial advantage over territorial states it was not because their system of government was necessarily more open, it was because it give creditors both information and control.

Though some assemblies in territorial states had control rights over public credit, in most territorial states public debt was managed through other means. In Castile spending and borrowing were managed by a royal Council of Finance rather than the Cortes despite the fact that this assembly played a prominent role in administering taxes within the realm. Towards the end of the sixteenth century the Cortes attempted to gain a degree of direct control over royal expenditure, but ultimately it had only limited success in this enterprise.[87] In France, while the monarchy often borrowed through intermediaries such as the municipality of Paris, overall management of the kingdom's finances was from the sixteenth century the responsibility of the Conseil des Finances (later the Conseil d'Etat et des Finances and subsequently the Conseil Royal des Finances). The members of this council were appointed by the king. After the sixteenth century finances were also managed by the secrétaires des finances.[88] What was distinct about this system was that government creditors played a much less direct role in managing state finances.

[86] One example here is provided by the city of Douai at the end of the thirteenth century as described by Espinas (1902).

[87] See Gelabert (1999 pp.215-216) and the discussion in Chapter 7.

[88] See the description of the evolution of these institutions in Dumont and Timbal (1966) as well as the extensive work of Hamon (1994, 1999) which focuses on French finances during the sixteenth century.

4.3 Who was Represented?

A core part of the argument of this book is that the evolution of and outcomes produced by representative assemblies depended heavily on the type of interests that were represented within them. There is a long-standing historical argument that city-states tended to be dominated by mercantile interests while territorial states tended to be dominated by landed interests. Individuals engaged in mercantile activities had an incentive to invest in government annuities as a means of diversification for the reasons already referred to above that have been emphasized by Postan (1952). The idea of city-states controlled by merchants can be found expressed prominently in the work of a large number of authors. These same authors also often emphasize that in most of Western Europe, members of the landowning nobility lived outside of the cities, breaking with a pattern set under the Roman empire.[89] Based on these existing arguments, we would not want to draw a simplistic distinction between city-states where merchant representation was complete and territorial states where it was completely absent, but it is worth considering to what extent existing arguments about merchant control of city-states can be supported by systematic data.

Not surprisingly, we lack a general measure that could give us a full comparative picture of the wealth composition of the political elite across the 31 European states in my sample. However, since European assemblies during this era tended to have rules explicitly dividing representation between different social groups, it is possible to consider this issue indirectly based on these rules. The rules governing who was represented were of course an endogenous feature that may not perfectly mirror the types of wealth held by a state's political elite, but they may nonetheless provide the best proxy available covering a broad sample of states. The constitutions of city-states often gave a fixed number of seats on

[89] On this point see in particular Weber (1921 p.95), Pirenne (1910), Sidgwick (1903), and Van Werveke (1963). The exceptions to this pattern were northern Italy and Provence.

the city council to merchants or patricians with remaining seats granted to representatives of craft guilds. Within city-states, in areas like Germany, the Low Countries, and Catalonia this was a subject of frequent contestation, as representatives of the guilds demanded greater representation on city councils that had previously been dominated by patrician elites. This "democratic revolution" took place in the Low Countries in the early 14th century and in Germany roughly a century later.[90] Assemblies in territorial states also generally had set representation for different social groups, including members of the clergy, representatives of the towns, members of the nobility, and in a few cases representatives from the peasantry.

In addition to deriving from different social groups, representatives in pre-modern assemblies were also selected using a variety of different methods. Broadly speaking, it appears from the sources listed in Table 4 that in territorial states, representatives were either directly nominated by a monarch, or they were elected by a group of constituents. One should not draw the conclusion from this, however, that assemblies where representatives were nominated in the former manner were necessarily weak. Established protocols often placed significant constraints on the ability of a ruler to refuse to extend invitations to specific individuals.[91] Within city-states one also sees an important distinction in how representatives were selected, in particular for the executive councils charged with day to day administration in towns. In many cities, particularly before the democratic revolution of the fourteenth century, these executive councils were selected by a system of cooptation, as a sitting council chose new members. In other cases, the executive was elected by a wider body of citizens, and after the democratic revolution of the fourteenth century this became the norm in many regions (though interestingly not in the cities of Holland). In some cases this constitutional shift appears to have produced a significant change in mem-

[90] For a concise description of this movement see Van Werveke (1963 pp.34-37)
[91] See Major (1960) on this point with regard to the French Estate General.

bership of representatives, while in other cases this was less true.[92] Finally, the use of selection by lot appears to have been relatively limited.[93]

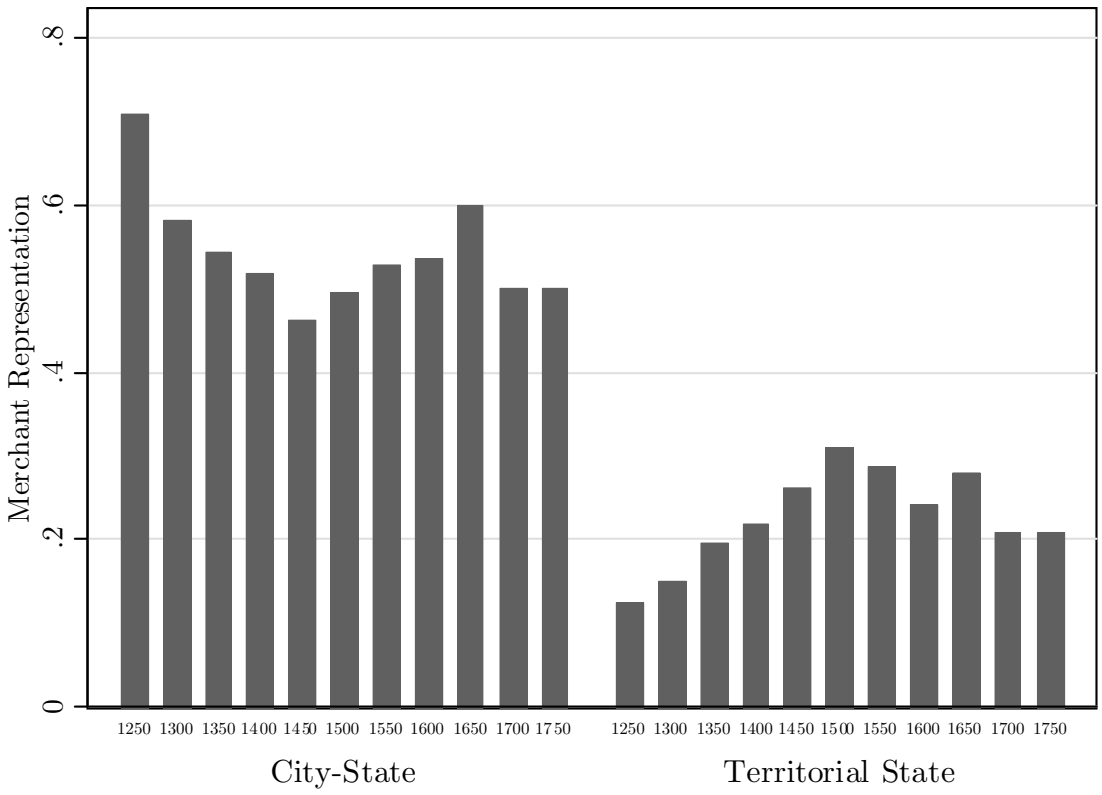
I have used all available information from the sources listed in Table 4 to estimate the extent of merchant representation in the assemblies each of the 31 states in my sample for each time period. For city-states "merchant participation" is categorized based on rules that exclusively reserved representation for "merchants", as was the case in Siena during the early fourteenth century, or, more commonly, where a certain number of seats on a ruling council area reserved for individuals described as patricians or high bourgeois, as opposed to artisans or members of craft guilds. For territorial states, I have measured merchant representation according to the presence of members of towns, as opposed to clergy, nobility, or other groups. In a few cases, such as France, I have also been able to distinguish between bourgeois engaged in commercial activities and those who were royal administrators.

Figure 7 shows the evolution of merchant representation over time, while also distinguishing between city-states and territorial states. The variable “merchant representation” has a maximum of zero and a minimum of one. For city-states one can see a decline in average representation for merchants that corresponds to the period of the "democratic revolution". However, the most salient feature here is the very large and persistent difference between the extent of merchant representation in city-states as opposed to territorial states. There are many reasons why the figures presented here certainly do not provide an exact proxy for the extent to which the political elite in a state had liquid wealth. The difference might be overestimated to the extent that patricians in city-states often had

[92] The former phenemenon is illustrated by the case of Douai in the fourteenth century (Espinas, 1902, Gilissen, 1954, Dumont and Timbal, 1966). Ghent provides a contrasting example (Blockmans, 1999).

[93] The exceptions involves Italian city-states (as has been emphasized by Manin, 1995), the city of Barcelona Barcelona (Corteguera, 2002), and the system used by a number of Castilian towns to select their representative to the Cortes.

Figure 7: Merchant Representation in City-States and Territorial States (average values)



investments in land.[94] They would be under-estimated, however, to the extent that for territorial states the measure of "merchant representation" used here includes all representatives from towns, whereas for city councils in city-states we often have more exact information on representation of different social groups within the city. In the end, however, given the magnitude of the difference observed in Figure 7, it seems difficult to dispute the idea of a sharp divide between the average identity of representatives in city-state and territorial state assemblies. One could also always entertain the possibility that the above results simply reflect a greater bias in the rules of representation within city-states, not a difference in the underlying social context, but this seems unlikely.

It is possible to supplement the systematic evidence on representation of mercantile interests with more specific information on the identity of government creditors in different European states. There are a number of important investigations of the identity of government creditors, particularly in city-states. Though the pattern of debt ownership certainly varied from state to state, with surprising frequency one finds reference to the fact that members of representative assemblies were themselves prominent investors in public debt. There are at least three recent prosopographic studies that provide evidence of a link between ownership of public debt and government office-holding in the Low Countries and which support the earlier evidence in this regard identified by Tracy (1985). Derycke (2003) provides detailed evidence on the identity of annuity purchasers in fifteenth century Bruges, and she emphasizes the extent to which those who were representatives in the Bruges city government themselves invested in public debt. Her evidence also points to a very high degree of concentration of annuities ownership, which went hand in hand with the very high degree of wealth inequality observed in the city. The study by van der Heijden (2003) of annuities ownership in the city of Dordrecht at the time of the Dutch revolt

[94] See Van Werveke (1963) and Reynolds (1984) on this point.

makes a similar point, finding that 34% of town magistrates and their family members were registered as public annuity purchasers. Finally, the work by van der Burg and 't Hart (2003) on annuity purchasers in the city of Amsterdam at the end of the sixteenth century, emphasizes the fact that urban magistrates were often prominent merchants and that these same magistrates were often prominent purchasers of public annuities. There is less extensive evidence on the identity of annuity purchases in German and Swiss city-states, but that evidence which does exist suggests a very similar relationship between political representation and debt ownership to that which existed in the Low Countries. So, for example, Schneider (1955 p.491) refers to the development of annuities sales in German city-states by suggesting that "the control of financial operations was exercised by men of the same condition and sometimes those directly interested [the annuity owners] acting as magistrates." Close investigations of representative politics and public credit in Lübeck and Cologne provide direct evidence to support this assertion.[95] The city-states of Northern Italy may have had a different pattern of debt ownership than other city-states. Those who governed owned debt, but ownership was also spread more widely among wealth holders, presumably due to the heavy reliance on a system of forced loans. Pezzolo (2003b) cites evidence suggesting that in 1427 a full 22 percent of Florentine households held debt, while by 1500 this was true of 14% of Genoese households.[96]

The case of France, a large territorial state, presents an interesting variant on the pattern of debt ownership in city-states. In the initial stages of France's long-term debt after 1522 public annuities were often held by officials, entities or municipal councils that themselves had certain control rights in the area of finance. As was mentioned above, this was most notably the case with officials from the municipality of Paris. To this extent debt

[95] For Lübeck see the discussion in Roz (1977) and for Cologne see Knipping (1897).

[96] Macdonald (2006 pp.94-96) also comments on the extensiveness of ownership of Casa di San Giorgio shares among Genoese citizens.

ownership in France resembled that in city-states. The key difference, however, was that the control rights of these groups in France were highly fragmented. So the municipality of Paris might have control over taxes levied in the city, but there was no representative entity in France that had control rights over royal finances more generally.

One question one might ask about membership of representative assemblies is whether this actually made a difference for the development of public credit or whether mercantile interests would have had preponderant influence over policies irrespective of the institutional structure. Merchants might dominate politics within a city-state through informal social networks or by lobbying a city council even if they were not actually members of this body. There is evidence for specific city-states that merchants were frequently consulted by town councils even when they were not members. It is also known that mercantile elites in city-states often had social organizations with restricted membership that had significant political influence.[97] Ultimately, however, the clearest indication that membership on representative bodies mattered is that the number of seats on city councils reserved for different groups within a community was a subject of very frequent political contestation. Those who led revolts and uprisings in city-states often focused on the objective of reforming town constitutions so as to broaden participation on councils while also making selection of representatives more democratic. This was the case in Cologne in 1396, Ghent in 1302, Lübeck in 1408, and Siena in 1355. Several of these instances will be considered in detail in Chapter 6. Subsequent to these constitutional changes, the "patrician" interests that had initially held power on these councils sought, in many cases with success, to undermine the objectives of the reforms by continuing to dominate council membership. The effect was that despite a change in the rules for selecting a council, their membership tended to be dominated by the same individuals, from the same families, and

[97] The Circle Society in Lübeck and the *Richerzeche* of Cologne provide good examples of this phenomenon. See Rotz (1977) on Lübeck and Dollinger (1956) on Cologne.

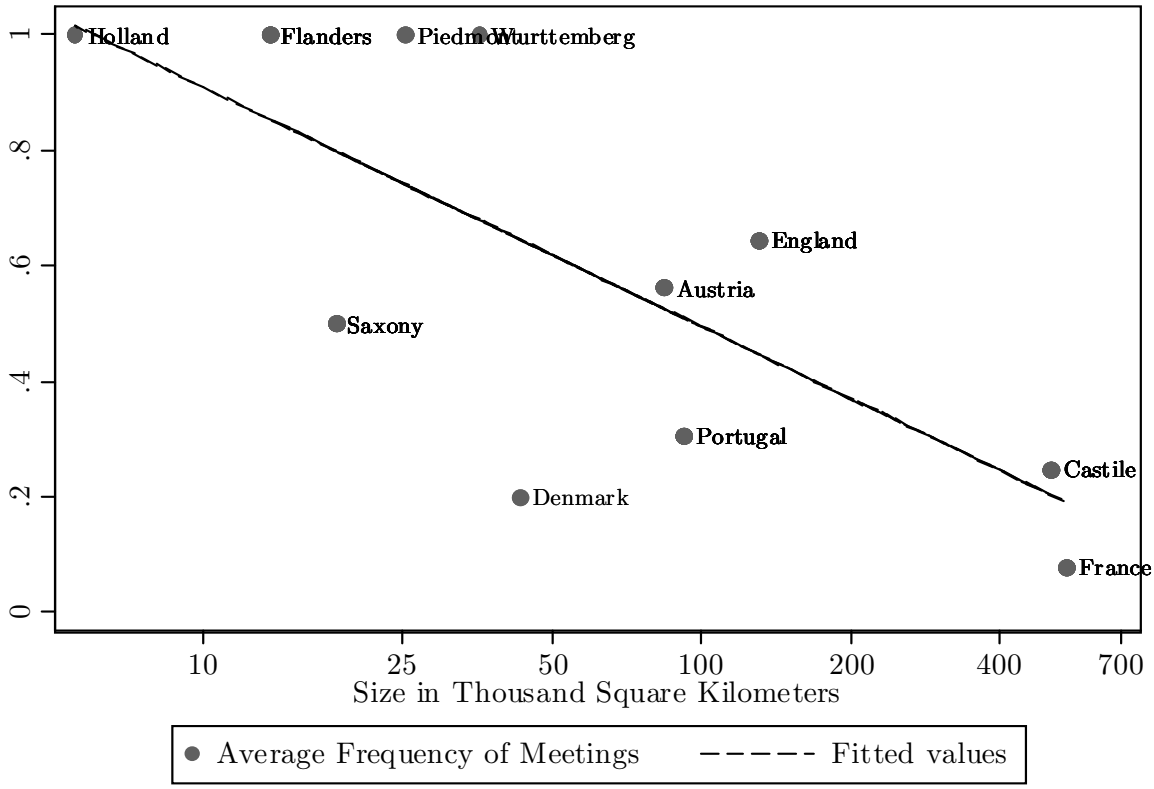
with the same economic interests as before. This outcome was not inevitable, however. The case of Siena after 1355 demonstrates that it was possible for a ruling oligarchy to lose political power following a revolt. In Chapter 6 I will suggest that while there is broad evidence that political outcomes in city-states were influenced by social networks independent of representative assemblies, there is clear evidence that formal representation on city councils also mattered a great deal for outcomes.

4.4 The Intensity of Representative Activity

With the origins, prerogatives, and membership of representative assemblies considered, the final question I address in this chapter is how frequently these assemblies actually met. In order for a representative body to engage in active monitoring of public finances the body will have to meet frequently. I have already referred to the argument by Blockmans (1997) that in pre-modern Europe intensive forms of representation could only occur in relatively small polities. City-states were small compared to territorial states. There was also significant variation in size within the group of territorial states. In this subsection I report systematic evidence on the frequency with which representative bodies met in different states over time. As with the data on prerogatives and membership in assemblies, my data on meeting frequency is drawn from a wide variety of secondary sources, all of which are listed in Table 4. The quality of this information varies from state to state. In some cases, such as France or England, we have an essentially complete record of meetings by national representative institutions. In other cases the evidence is much more approximative. The data are nonetheless very useful for addressing broad variation in the intensity of representative activity both across states and over time.

I have coded a measure of the frequency of assembly meetings which ranges which ranges from 0 (no meetings) to 1, which represents a meeting taking place at least once

Figure 8: State Size and Frequency of Assembly Meetings in Territorial States



a year. Since some representative assemblies actually met more frequently than once a year, this measure is "censored". I have opted for this approach because of the difficulty of measuring activity at intra-annual frequencies. Based on this exercise, I have found no evidence of a city-state with an assembly or collective representative body that did not meet at least once a year. In contrast, in half of the territorial state cases an assembly met less than once every two years, and in a quarter of cases less than once every four years. The data that I have collected on representative institutions also allows for conducting a more fine-grained test of Blockmans' argument that it was only feasible to sustain a high intensity of representative activity in small states.

Figure 8 shows the average frequency with which assemblies in territorial states met (counting only periods where they had an assembly) plotted against the size of the polity (measured in square kilometers).[98] While it should be emphasized yet again that the data on meeting frequency should not be seen as exact, they do probably provide a faithful indication of qualitative differences between these assemblies. These differences appear to be highly correlated with size. The four territorial states with assemblies that met annually were all quite small (Flanders, Piedmont, Württemberg , and Holland). Likewise, the two largest states in the sample (France and Castile) had assemblies that met less frequently than average.

The information in Figure 8 averages away the variation in meeting frequency over time. In France, for example, the Estates General never met frequently, but over time this pattern was accentuated. As referred to above, a number of scholars have argued that after 1500 there was a general decline in the activities of representative assemblies in Europe. In what follows I briefly investigate whether we continue to observe a correlation between state size and meeting frequency when considering variation across countries, over time, and

[98] For polity size I refer to the area of the modern state or region that corresponds most closely to the pre-modern state in question.

when controlling for the possibility of general European trends in representative activity. Table 5 reports the results of the following simple regression where meeting frequency is estimated as a function of state size and a set of time period dummies (represented by u_t) that control for Europe-wide trends.

$$Frequency_{it} = \alpha_1 + \alpha_2 \log(\text{size sq. km})_i + u_t + \varepsilon \tag{10}$$

One question is how to code frequency for cases where an assembly did not exist - should they be counted as zero or excluded from the sample? I have considered both options. The first two columns in Table 5 use the former method and columns (3) and (4) use the latter option. In addition to reporting standard OLS estimates, I also report Tobit regressions, which take account of the fact that the measure of meeting frequency is "censored" at 1.

Table 5: Size as a Determinant of Representative Activity in Territorial States

	(1) OLS	(2) Tobit	(3) OLS	(4) Tobit
If assembly does not exist?	freq.=0	freq.=0	excluded	excluded
Size (square km)	-.080	-.115	-.228	-.305
	(.034)	(.041)	(.025)	(.036)
Constant	.589	.763	1.65	2.09
	(.195)	(.231)	(0.16)	(0.24)
R^2(pseudo for tobit)	.090	.073	.635	.594
Includes period dummies?	yes	yes	yes	yes
N=	105	105	68	68
F-Test for period dummies	p=0.97	p=0.95	p=0.25	p=0.23

The results of the regressions in Table 5 are striking, as the coefficient on state size is consistently negative and statistically significant. Interestingly, the hypothesis that

representative activity depended on state size actually receives more support here than does the hypothesis that representative activity depended above all on broad European trends involving a decline in assemblies after 1500.

4.5 Summary

In this chapter I have presented an overview of the evolution of representative institutions in Europe, focusing on the presentation of systematic data charting the existence, prerogatives, and intensity of activity for representative assemblies in 31 different political entities. In doing so I have emphasized how this evidence relates to long-standing historical arguments about the emergence and evolution of political representation between 1250 and 1750. Though my classifications are certainly far from exact, several trends are apparent, and these are of such a magnitude that it seems difficult to argue that they could be purely the result of statistical coding choices. First and foremost, there is a dramatic difference in the activities of representative assemblies in city-states and territorial states, and in particular regarding prerogatives over finance. The fact that there is such a stark difference in the financial prerogatives of these two groups of states, and that this difference persisted over several centuries suggests that strong representative institutions did not evolve by accident or primarily as a result of conjunctural circumstances. Once the pattern of division was set between city-states on one hand and territorial states on the other, and this happened before the middle of the thirteenth century, then the subsequent evolution of representative institutions was heavily conditioned by the fact that city-states were small, making it easier to sustain frequent meetings of an assembly, and city-states were dominated by merchants, which had further clear implications for the development and evolution of their institutions. These conclusions are supported by the evidence I have presented on the correlation between polity size and the intensity of representative activ-

ity, as well as by information on the heavy representation of merchants in city-states when compared to territorial states. In territorial states underlying factors were less favorable to the evolution of active representative institutions. However, there was also significant variation in representative institutions within the group of territorial states (both across states and over time), and in the next chapter I will explore in detail whether this had implications for the evolution of public credit.

5 Representation and Credit in a Broad Sample of States

The previous two chapters have painted a broad picture of the emergence of representative assemblies and the development of public credit in Europe. I have suggested that the timing of the creation of a long-term public debt, as well as subsequent trends in borrowing costs, seem difficult to explain by referring exclusively to economic factors like urbanization or to exogenous changes in private interest rates. I have also highlighted the strong contrast between city-states and territorial states. City-states created a long-term debt earlier than their territorial neighbors, and they borrowed at lower rates of interest. City-states also had more active representative assemblies that played a more direct role in managing and monitoring public debt. The goal of this chapter is to bring the evidence on the evolution of public credit and of representative institutions together to present a more complete set of empirical tests. The theoretical model developed in Chapter 2 suggested that when the cost of maintaining a representative assembly is low, and when government creditors are more likely to be influential within such an assembly, then we should observe a lower cost of government borrowing, as well as an earlier decision by a government to create a long-term public debt.

In what follows I first ask what factors were correlated with the initial creation of a long-term public debt. I test three alternative hypotheses: (1) that access to credit depended only on commercial and economic development and not on political conditions (2) that access to credit depended on the presence of representative institutions (independent of underlying conditions), (3) and finally that access to credit depended on the differing underlying political conditions in city-states and territorial states. As part of this effort, I distinguish between representative institutions best characterized as providing possibilities for passive monitoring of an executive, as opposed to active monitoring involving the possibility of *ex ante* corrective actions. The evidence is most directly supportive of hypothesis

3. There is clear evidence from these regressions that the presence of a representative assembly, and in particular one engaging in active monitoring, was associated with earlier creation of a long-term debt. However, once one controls for the difference between city-states and territorial states, this apparent effect of representative institutions disappears. This result is consistent with my core argument that the emergence and subsequent behavior of a representative assembly depends on underlying conditions involving state size and the wealth composition of the political elite. It would also, however, be consistent with an interpretation that other differences between city-states and territorial states that had nothing to do with their political features drove outcomes with regard to credit. While my regressions do include a number of controls for economic conditions, in addition to suggesting an instrumental variables strategy to deal with this problem, ultimately it is not possible to control with certainty for these conditions in the broad sample regressions performed here. This makes the results of the case study material in Chapters 6 and 7 particularly important.

After considering the conditions under which long-term public debts were created, this chapter next examines whether and how political conditions influenced borrowing costs for a state given that it had created a long-term debt. I test the same set of three hypotheses. When not controlling for the difference between city-states and territorial states we see evidence of lower interest rates on public debt in states with representative assemblies, but this is now true only for those assemblies that engaged in active monitoring involving direct control of spending and debt. We know that this institutional feature existed almost exclusively in city-states. It is not surprising then to observe that once we control for the difference between city-states and territorial states, there is no longer a significant negative effect of representative institutions on interest rates.

The final two sections of the chapter consider to what extent the statistical results are

influenced by issues of sample selection and by the endogeneity of city-state development. Sample selection can involve situations where we have information on a state, but no observed data for debt. This is the case with territorial states in earlier centuries. Sample selection can also involve situations where a state drops out of the sample entirely, so there is no data for either the dependent or explanatory variables. This is the case with some city-states in the post-1500 period. The endogeneity of city-state development involves the possibility that city-states emerged in more highly developed areas of Europe and that despite my inclusion of contemporaneous variables as proxies for the level of development, the city-state dummy in my regressions is simply proxying for the fact that a certain micro-region was more economically advanced. In what follows I show that contrary to arguments made by authors like Tilly (1990), the evidence that city-state development depended on an initial level of economic development may be weaker than one would think. I argue as an alternative that a series of historical accidents occurring during the breakup of the Carolingian empire may have been a more significant determinant of the subsequent path of city-state development. I investigate the possibility of using this historical event to construct an instrumental variable for city-state development that can then be used to investigate the possibility that my core empirical results are biased by the endogeneity of city-state development. However, I also caution that there may exist reasons why this instrument does not satisfy the necessary exclusion restriction.

5.1 Representative Institutions and the Creation of a Public Debt

It is well known that long-term debt as an instrument of government finance developed significantly earlier in some European regions, such as the Low Countries and Northern Italy, as opposed to France, Castile, or England. What has not been established is the factors that can best explain this differential development. In what follows I show that

even after using the best available controls for the fact that city-states existed in areas that were more economically developed, we observe a strikingly larger probability of early debt creation for city-states as opposed to territorial states. We also observe a significantly higher probability of early debt creation for states with representative assemblies that had financial prerogatives. This effect is most pronounced when representative institutions are defined as those where an assembly has powers to engage in active monitoring. However, these results regarding representative institutions disappear when we simultaneously control for the difference between city-states and territorial states. My empirical results are thus consistent with my argument that representative institutions mattered, but their origins and effects were dependent on underlying conditions involving small size and the preponderance of a political elite holding liquid wealth.

5.2 Empirical Specification

Chapter 2's theoretical model suggested that a sovereign will be more likely to take the decision to borrow when the cost of maintaining a representative assembly m is low, when the return on alternative assets r is low, and when he or she can produce more units of output with a given loan size (which will depend on the function $F(.)$). A sovereign will also be more likely to borrow the lower the value of his outside option v. To fully test all of the implications of the model, one would need precise measures for each of these factors. This is clearly not possible, but we can nonetheless use the predictions of the theoretical model to aid in choice of empirical specification as will be described below. In what follows I use a probit regression to estimate the probability that a state will create a long-term public debt. The goal here is to attempt to test three alternative hypotheses - (1) that access to credit depended on commercial and economic development (2) that access to credit depended on having strong representative institutions (independent of underlying

conditions), and (3) that access to credit depended on the different underlying political conditions in city-states and territorial states.

$$\Pr(\text{debt}_{ijt}) = \Phi(\beta_0 + \beta_1 \ln(r^{\text{lr}}_{jt}) + \beta_2 \ln(\text{urban})_{jt} + \beta_3 \ln(\text{pop})_{ijt} + \beta_4 \text{city}_i + \beta_5 \text{represent}_{ijt} + \beta_6 1500) \tag{11}$$

In the above equation the variable "debt" takes a value of 0 for all time periods where a state has not yet created a long-term public debt, and a value of 1 for the period where a state first established a long-term debt. The notation i here refers to an individual state, j refers to a European region, and t refers to time. In addition, the data are grouped into fifty-year time periods. It is important to note that in some cases in the data a state is contiguous with its region (as with France and England), but in most cases, such as states in Italy, Germany, or the Low Countries, there are multiple states within a particular region.[99] Once a state creates a public debt it is dropped from the estimation for subsequent periods. This method allows for focusing on the factors associated with the initial move to create a long-term public debt.[100]

I proxy for r the risk-free return on capital in a specific state by using three separate measures: (1) data on returns for land rent contracts in different European regions, (2) data on urbanization, and (3) data on capital city size. The data on returns for land rents is drawn from the study by Clark (1988), as described in Chapter 3.

[99] If I did not drop observations for states that had already created a public debt, then the estimation would have a different interpretation, because it would involve a comparison between economic and political conditions when a public debt had not yet been created with conditions during or subsequent to the establishment of a debt. See Beck, Katz, and Tucker (1988) on this point.

[100] The use of a probit model to estimate the probability that states will create a public debt does imply one additional assumption that is worth making explicit. In adopting this modelling choice I am assuming that once each of the variables in this regression is controlled for, the "hazard rate" for creating a public debt is constant over time. As I will describe below, this is a modeling choice that has a significant implication for inferences about the effect of one of the control variables (the rate of return on land rents), but the choice to keep or dispense with this assumption does not have a significant implication for inferences about the distinction between city-states and territorial states. Nor does it have a significant effect on inferences about the impact of representative institutions.

The second economic variable I use to proxy for the risk-free return on capital is the urbanization rate for each major European region as measured by Bairoch, Batou, and Chevre (1988). This is based on the data constructed by these authors for populations of all individual cities in a territory that by 1800 reached a size of at least 5000 inhabitants. The urbanization rate is then measured as the overall urban population for a territory divided by the territory's total population. While the urbanization rate is available for all European regions, estimates of city populations for earlier periods undoubtedly involve substantial uncertainty. There is one urbanization observation available per century for each European region, so I have interpolated values for mid-century observations. Like the land rents data, since urbanization is measured only by region, in some cases, such as France or England, we have a measure of urbanization that is contiguous with a specific state. In other cases, such as states in Germany or Italy, we have only an urbanization rate of a region that is larger than the individual state in consideration.

As a third control variable, I also include the natural log of capital city population (in thousands). For city-states this variable measures the population of the core city, excluding population in any subject areas. For territorial states this variable measures the population of the capital city. Unlike the land rent return and urbanization variables, we have access to an estimate of capital city population that is specific to each state, and not just to a region. As a result, the "capital size" variable may usefully capture variation in the risk-free return to capital within regions that is not captured by the other two variables.[101]

In addition to the controls for returns on land rents, urbanization, and capital size, I

[101] Independent of whether a larger capital city was associated with actual creation of a public debt, in previous work (Stasavage, 2007) I suggested that we might also be more likely to have a historical record of public debt being created in such states. So, for example, if the episode in 1522 where the French monarchy first issued rentes has been well studied, the initial creation public debts in Denmark and the city-state of Zurich has not received the same attention.

also include a crude control for structural change. This may proxy for a shift in either the outside option v for sovereigns or a change in their production function $F()$. As has been emphasized in previous chapters, the conditions that favored creation of a public debt in the three centuries between 1200 and 1500 were significantly different from those favoring this institutional innovation after 1500.

First, the period after 1500 was associated with a "military revolution" involving changes in military technologies associated with a massive increase in army sizes in Europe. Though it is much debated whether this military revolution was driven by exogenous changes in technology, to the extent that this was the case, we could think of the period after 1500 as being associated with a change in the returns to scale in a state's production function. An increase in returns to scale would weaken the participation constraint for the larger territorial states. It might well have increased the participation constraint for city-states, but by 1500 almost all city-states in the sample here had already created a long-term public debt.

An alternative view, already referred to above, is that an increase in the intensity of inter-state competition after 1500, triggered in particular by Habsburg attempts to establish European domination, made it more urgent for territorial states to establish a long-term debt. In terms of Chapter 2's theoretical model this would imply a decline in the value of the outside option v.

Irrespective which one of the two above interpretations is more accurate, they both point to a need to control for structural change around the year 1500. To take account of the above possibilities for structural change, in the probit regression I include a dummy variable 1500 that takes a value of 1 for all periods beginning in this year and a value of zero for all previous periods.

The core variables in the regression are those that distinguish between city-states and

territorial states and which capture the structure of representative institutions. The variable "city-state" is a dummy indicator taking a value of 1 for city-states and 0 for territorial states, based on the classification proposed in Chapter 3. The variable "represent" is designed to capture the extent to which there is a representative body that has prerogatives in the area of taxation and/or finance. Five alternative measures are proposed, following the distinctions in Chapter 4.

The first is based on a dichotomy between states that have any sort of representative assembly and those that do not.

The second definition is based on a dichotomy between states in which there is a representative assembly that has some veto power or right of say with regard to taxation and those states that either do not have an assembly or that have an assembly with no authority with regard to taxation. Such powers would fall under the rubric of passive monitoring, as they could allow an assembly to levy an *ex post* sanction on an executive who defaulted.

The third definition establishes a dichotomy between states with a representative assembly that had authority over administering taxes (in addition to approving taxes) and those states that either did not have assemblies or which had assemblies that did not enjoy these prerogatives. Such assemblies would fall under the rubric of passive monitoring to the extent they could use their tax powers to levy *ex post* sanctions. They might also be able to engage in active monitoring if the power to administer taxes would mean the power to take corrective actions with regard to revenue collection so as to avoid defaults.

The fourth measure is based on a dichotomy between assemblies that had a degree of direct control over public spending and public credit, and those assemblies that did not have such privileges. Assemblies satisfying this requirement would most clearly fall under the rubric of active monitoring, because their prerogatives would allow them to take *ex*

ante actions to avoid default from taking place. It should be emphasized that this last dummy variable is almost perfectly correlated with the "city-state" dummy, since the only territorial states where assemblies had direct control over debt were England after 1688, the Dutch Republic, and Württemberg .

The fifth and final measure of "representation" focuses on the extent to which a representative assembly was active, as opposed to focusing on its prerogatives. This measure reports the best available estimate of the frequency with which an assembly met, with a maximum of 1 for cases where assemblies met annually during a given fifty year period, and a minimum of 0 for states where assemblies were absent or in which assemblies technically existed but did not meet at all during a given fifty year period (as was the case with the French Estates-General after 1614). I have previously argued that n order to be able to engage in active monitoring, a representative assembly would need to meet frequently.

5.2.1 Regression Results

Table 6 reports the estimates of the probability of creating a long-term national debt, based on equation (11). The first regression includes only the economic controls, the dummy variable for years after 1500, and the city-state dummy variable. The two clearest results from this regression are the marked increase after 1500 in the likelihood of a state creating a public debt (the coefficient on the post-1500 dummy is positive and highly significant) and the clear difference between city-states and territorial states, with the former group being much more likely to create a public debt at an early date. This constitutes some evidence that the observed difference between city-states and territorial states is not attributable simply to the fact that city-states emerged in more developed regions of Europe. Based on regression (1), if we consider the economic control variables at their means, then in any given period before 1500 a city-state would have an estimated 32% probability of creating

a public debt (given that it had not already done so), and a territorial state would have only a 3% probability of doing so. In any post-1500 period a city-state that had not already created a public debt would have an estimated 87% probability of doing so, and a territorial state a 34% probability of doing so. In terms of the economic controls, the coefficient on urbanization is positive as one would expect, though it is not statistically significant at conventional levels. There is no evidence here for an effect of capital city size. The coefficient on the land rent return is negative though not statistically significant, but it should be remembered that almost all of the observed variation in land rent returns involves the secular decline in these returns over time, as opposed to variation between regions.[102] For this same reason, very similar results are obtained in the Table 6 regressions if we include a linear time trend instead of the land rent return variable, or if we include a full set of period dummies as a substitute for both the land rent return variable and post-1500 dummy.

The regressions in columns 2 through 6 extend the specification by adding alternatively one of the five different representative institutions variables. These involve, once again, whether an assembly existed, whether its approval was required for taxes, whether an assembly existed that administered taxes, whether an assembly existed that administered spending and debt, and finally a variable coding the frequency with which an assembly met. In all five cases we observe that the coefficient on the representative institutions variable is positive and highly statistically significant. States with representative institutions are estimated to be more likely to have created a public debt at an early date. The substantive magnitude of this estimated effect is largest when we dichotomize between states that had representative institutions that engaged in active monitoring involving direct control

[102] When not including the 1500 dummy, the coefficient on the land rent return variable is negative, and it is highly significant.

Table 6: Probit Estimates - Probability of Creating a Long-Term Debt

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
land rent return	-.354	.365	.420	.101	-.049	.207	-.340	-.355	-.282	-.306	-.283
	(.592)	(.506)	(.541)	(.600)	(.601)	(.524)	(.582)	(.582)	(.610)	(.575)	(.621)
urbanization	.329	.317	.281	.262	.256	.274	.343	.329	.307	.311	.316
	(.189)	(.174)	(.171)	(.162)	(.168)	(.190)	(.191)	(.186)	(.178)	(.189)	(.186)
capital city size	.029	.050	.064	.165	.081	.113	.035	.029	.092	.043	.054
	(.111)	(.120)	(.123)	(.103)	(.105)	(.133)	(.106)	(.105)	(.110)	(.120)	(.109)
post-1500 dummy	1.47	1.14	1.19	1.28	1.34	1.26	1.49	1.47	1.50	1.46	1.46
	(0.51)	(0.40)	(0.44)	(0.46)	(0.46)	(0.46)	(0.49)	(0.50)	(0.51)	(0.51)	(0.49)
city-state	1.43						1.31	1.44	1.01	1.15	1.12
	(0.39)						(0.42)	(0.50)	(0.44)	(1.06)	(0.55)
assembly existed		0.87					.358				
		(0.26)					(.325)				
assembly approves taxes			.723					-.006			
			(.270)					(.389)			
assembly administers taxes	.			1.19					.600		
				(0.35)					(.431)		
assembly administers debt					1.23					0.29	
					(0.36)					(1.01)	
frequency of meetings						1.27					.439
						(0.33)					(.519)
constant	-2.20	-3.44	-3.32	-3.13	-2.51	-3.40	-2.34	-2.01	-2.46	-2.12	-2.36
	(1.50)	(1.27)	(1.28)	(1.47)	(1.45)	1.45	(1.49)	(1.48)	(1.54)	(1.49)	(1.61)
Prob>Chi^2	.001	<.001	.005	.004	<.001	<.001	.001	.001	<.001	.001	.001

N=131, Heteroskedastic-consistent standard errors in parentheses, adjusted for clustering by state.

of debt, and those states that either did not have assemblies or which had assemblies that lacked this prerogative. However, we also know from Chapter 4 that representative assemblies which engaged in active monitoring emerged almost exclusively in city-states. The regressions in columns 2 through 6 do not control for any underlying differences in political (or other) conditions between city-states and territorial states.

As a final step in Table 6, regressions 7 through 11 consider the effect of representative assemblies while simultaneously adding a dummy variable to control for the differences between city-states and territorial states. Given that city-states almost all had representative bodies that met frequently and which engaged in active monitoring of public finances, what this now means in practice is that we are comparing city-states with different types of territorial states, distinguished according to the prerogatives of their representative institutions. We now observe very little evidence of an effect of representative institutions, as none of the five representative institutions variables is statistically significant. In strong contrast, there continues to be a strong and statistically significant difference between the group of territorial states and the group of city-states in all but one of these regressions. The single exception is the case where representative institutions are measured based on a dichotomy between states with an assembly that engages in active monitoring by directly administering debt and states without such an assembly. But this is not surprising given that this variable is almost perfectly correlated with the city-state dummy, which again supports the core argument of this book. We obtain a very similar result with regard to the representative institutions coefficients if we include a set of state fixed effects in the regression rather than a simple dummy for city-states. While there is little change in the representative institutions variables for city-states over time, there is significant over-time change in the group of territorial states, making the inclusion of fixed effects in this manner a realistic possibility.

In sum, the results in columns 7 through 11 provide evidence of a significant underlying difference between city-states and territorial states, but there is much less evidence here that representative institutions mattered independent of this city-state versus territorial state distinction. This result holds despite the inclusion of both England (after 1688) and the Dutch Republic in the sample, two states that were success cases with respect to public debt and which had assemblies that met frequently and played an active role in finance.

One interpretation of the above results is that the lack of firm evidence regarding representative institutions in territorial states is due to small sample size - there are simply too few territorial states in the sample to demonstrate a significant difference between those with and without strong representative institutions. A second interpretation of these results fits with the core argument of this book. The creation of a long-term public debt was indeed associated with the presence of active representative institutions, but these two features were themselves dependent on the underlying factors that shaped politics in city-states. Small size made it possible to have intensive representative activity. A political elite whose wealth was liquid made it likely that any representative assembly would be controlled by government creditors.

5.3 Representative Institutions and the Cost of Borrowing

In addition to finding that city-states established long-term debts before their territorial neighbors, in Chapter 3 I also presented summary evidence showing an apparent interest rate differential between city-states and territorial states. I now ask whether this interest rate differential appears attributable primarily to the different economic conditions that prevailed in city-states, or alternatively, to the political conditions that prevailed within these entities. I also consider whether, when it came to costs of borrowing, city-states were similar to other states that had strong representative institutions. We can use the

insights from the theoretical model of Chapter 2 to establish several predictions about the interest rate on public debt. First, this rate should be lower in more developed areas where the risk-free return on capital r was low. Second, we should observe a lower interest rate on government debt in those cases where creditors found it less costly to organize a representative assembly (a lower value of m).

5.3.1 Empirical Specification

We again face the problem that the parameters of the theoretical model cannot be directly observed, but it is possible to propose an empirical specification that uses several plausible proxy variables. In what follows I estimate the following regression. The variable $\ln(i_{ijt})$ represents the observed interest rate on public debt in state i in region j at time t, based on the interest rate data discussed in depth in Chapter 3.

$$\ln(i_{ijt}) = \gamma_0 + \gamma_1 \ln(r^{\text{lr}}_{jt}) + \gamma_2 \ln(\text{urban})_{jt} + \gamma_3 \text{life}_{ijt} + \gamma_4 \text{city}_i + \gamma_5 \text{represent}_{ijt} + u_{ijt} \quad (12)$$

The regression includes two controls for economic conditions and one control for the type of debt instrument. As a proxy for the risk-free return on capital, I use the Clark (1988) data on land rent returns. To emphasize again, this variable produces very similar results to the inclusion of either a linear time trend or a set of time dummies. As in the previous set of regressions, I again make use of the urbanization rate, because it may serve as a further useful proxy for the risk-free return on capital. As before, I also considered including capital city size as a further economic control variable, but I found it never to be statistically significant and excluded it from the final reported results. The regression also includes a dummy variable "life" which takes a value of 1 for interest rates associated with annuities on a single life, and a value of 0 for interest rates on perpetual annuities, annuities on multiple lives, and all other forms of long-term debt observed here. Since

the income stream from a life annuity was extinguished upon the death of the holder (or a nominee), we would expect lenders to require a relatively higher return in order to purchase this type of debt.[103]

The core variables concerning my political hypotheses remain the same as in the previous set of regressions. A dummy variable is included to distinguish between city-states and territorial states, together with a variable measuring the presence of a representative assembly. Five measures are again considered involving the presence of (1) any assembly (2) an assembly that could refuse tax increases (3) an assembly that administered taxes (4) an assembly that engages in active monitoring by directly administering debt, in addition to (5) a measure based on the frequency with which an assembly met.

5.3.2 Regression Results

Column (1) in Table 7 reports results of a baseline model that includes the three economic control variables as well as the city-state dummy. The coefficient on each of the economic controls has the sign one would expect and is highly significant. In addition, the coefficient on the city-state dummy is negative and highly significant. If we consider debt other than life annuities and set the economic control variables at their mean values, the estimated interest rate at which a city-state borrows would be 4.8% while a territorial state would borrow at 6.6%.

The next five columns add one of each of the five representative institutions variables to the specification. Here we observe that only certain types of representative institutions were associated with lower borrowing costs. In states where a representative assembly

[103] I also considered a final control for structural change in the regression by including a dummy variable for periods beginning with the year 1500. In contrast to the previous estimates on the likelihood of a debt being created, this structural change dummy was never significant in any of the interest rate regressions, and as a consequence it was excluded from the final reported results.

Table 7: OLS Estimates of the Cost of Borrowing

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
land rent return	.854	.585	.617	.582	.671	.621	.850	.878	.853	.872	.891
	(.197)	(.161)	(.162)	(.140)	(.165)	(.161)	(.200)	(.209)	(.191)	(.225)	(.219)
urbanization	-.137	-.133	-.137	-.136	-.109	-.137	-.136	-.134	-.126	-.143	-.135
	(.072)	(.075)	(.078)	(.076)	(.071)	(.078)	(.071)	(.072)	(.072)	(.078)	(.073)
life annuities (dummy)	.519	.502	.486	.499	.502	.519	.520	.533	.529	.522	.511
	(.169)	(.160)	(.159)	(.158)	(.158)	(.164)	(.170)	(.172)	(.170)	(.172)	(.173)
city-state (dummy)	-.321						-.367	-.387	-.372	-.368	-.407
	(.122)						(.128)	(.138)	(.122)	(.187)	(.153)
assembly existed		-.051					.125				
		(.098)					(.084)				
assembly approves taxes			-.138					.095			
			(.088)					(.058)			
assembly administers taxes				-.034				.	.103		
				(.134)					(.101)		
assembly administers debt					-.215					.051	
					(.088)					(.101)	
frequency of meetings						-.171					.128
						(.103)					(.083)
constant	.652	1.01	1.02	1.00	.878	1.04	.580	.566	.589	.629	.529
	(.386)	(0.37	(0.37)	(0.36)	.353	(0.38)	(.398)	(.426)	(.411)	(.410)	(.453)
R^2	.406	.331	.345	.330	.373	.349	.413	0.410	0.414	0.407	0.411

n=102, Heteroskedastic-consistent standard errors in parentheses, adjusted for clustering by state.

existed that engaged in active monitoring of both debt and spending we observe lower costs of borrowing. We also observe the same effect for assemblies that met frequently, and it is known that in order for an assembly to engage in active monitoring it would have to meet frequently. In contrast, there is no evidence that the presence of an assembly with less extensive prerogatives was associated with lower interest rates on public debt.

The final five regressions in Table 7 consider the correlation between interest rates on public debt and representative institutions while simultaneously controlling for the difference between city-states and territorial states. Irrespective of the measure included, there is a statistically significant interest rate differential between the group of territorial states and the group of city-states. The estimated magnitude of this differential also remains close to that observed when omitting a variable for representative institutions from the specification. Somewhat surprisingly, the coefficient on the city-state dummy variable remains statistically significant even when it is included simultaneously with a dummy variable for states with assemblies that had direct control over issues of public debt, despite the fact that these two variables are very highly correlated. These results provide strong evidence of an underlying difference between city-states and territorial states.

In regressions 7 through 11 in Table 7 none of the coefficients for the measures of representative institutions are negative.[104] Though they are not statistically significant at conventional levels, if one had to draw a conclusion based on these results, it might suggest that within the group of territorial states, having a representative assembly with veto power over taxes was, if anything, associated with borrowing at a higher interest rate (the p-value on this coefficient is 0.11). We might also conclude that within this group of states, the more frequently an assembly met, the higher the interest rate a state was obliged to pay on its debt. It should be emphasized that this evidence of a positive correlation between the

[104] I also examine whether the inclusion of state fixed effects in these regressions (dropping the city-state dummy) altered this conclusion and found that it did not.

strength of a representative assembly and the interest rate is neither statistically significant nor robust. It is nonetheless consistent with the idea raised by authors like Downing (1992) that in some European states after 1500 monarchs found representative assemblies more of an obstacle than and aid in raising finance. I will return to this issue at greater length in the discussion of France in Chapter 7.

Since the regressions I present pool countries over a very long time span, it is important to examine whether the observed difference between city-states and territorial states was the product of one specific time period. Epstein (2000) argues that city-states initially were able to borrow at lower rates of interest than monarchies, but this difference diminished over time as large monarchies adopted better financial techniques. One logical way to address this question is to consider the difference between city-states and territorial states only for later centuries, and in particular for the period after 1500 when territorial states first began to create long-term public debts. When I performed this test the results were remarkably similar to those observed when considering the entire sample. The coefficient on the city-state variable was consistently negative, statistically significant, and either of the same magnitude or larger magnitude than in the regressions on the entire sample. Once we control for the city-state/territorial state difference, there was again no evidence that territorial states with representative assemblies enjoyed lower costs of borrowing than did those without. In fact, when representation is measured based on having an assembly that administers taxes or on having an assembly that meets frequently, we actually see a statistically significant effect in the opposite direction. It should be emphasized that this is a result based on a small sample and may not be robust, but it again raise the possibility that in a number of territorial states lower borrowing costs were actually associated with a weakening of representative assemblies over time.

To summarize, we see evidence from these regressions that the presence of representa-

tive institutions characterized by active monitoring of public finance was associated with significantly lower costs of borrowing, but such institutions emerged almost exclusively in city-states, suggesting that the institutions themselves may have been an outcome driven by underlying conditions. There is no evidence in these regressions that representative institutions characterized by passive monitoring were associated with lower interest rates on public debt.

5.4 Issues of Sample Selection

The results above regarding costs of borrowing and creation of a public debt are consistent with idea that underlying political conditions in city-states facilitated access to credit. However, it is possible that this result may be produced by one of several forms of selection bias. For many states in many periods we do not observe an interest rate on government debt. In some cases this was because a state had not yet established a long-term debt. In other instances a state had already borrowed, but there is no recorded interest rate. In still other instances there is no interest rate for a specific period because a state no longer existed.

If we knew that the processes driving each of the above possibilities was unrelated to the interest rate on debt, then these selection problems could be safely ignored (apart from the effect of reducing sample size and thus efficiency of the estimates).[105] The most obvious reason this will not be the case is that the theoretical model in Chapter 2 predicts

[105] Logically, there should also be a further possible influence of sample selection in my analysis involving the possibility that a European state might not appear at any point in the sample, because I have not identified a record of the state having a long-term public debt during the period considered. This is the case for countries like Poland, Hungary, and Portugal. We might expect this to generate a biased inference regarding the effect of representative institutions if states in this category had representative institutions that were either weak of absent. However, it is not at all clear that this was the case. For Poland it is well known that the Diet actually had very considerable powers, including the power even to select the monarch. Bardach (1965) provides a review of this representative institution in Poland. Downing (1992 ch.6) argues that the strength of the Polish Diet actually helped lead to Poland's eighteenth century downfall.

that the same economic and political conditions associated with higher interest rates on public debt, may also prompt a state not to create a public debt in the first place. Given the findings regarding the determinants of debt creation, not accounting for this selection effect should, if anything, reduce the estimated interest rate differential between city-states and territorial states. If we could observe the interest rate at which territorial states would have borrowed during the 14th and 15th centuries had they established a long-term debt at this early date, we might observe an even larger gap. This type of bias would exist if the reason that territorial states moved to create public debts after 1500 involved changes in p (revenue volatility) or m (monitoring cost) parameters for territorial states relative to city-states. If, alternatively, the reason that territorial states after 1500 created a debt had more to do with a drop in the value of their outside option v, then we would not expect the conclusions of the current interest rate regressions to be biased by this type of sample selection. The interest rate premium that territorial states had to pay on their debt $(i-r)$ would have been unchanged, but their incentive to borrow at this existing rate would have increased. A priori, given the evidence in Figure 4 in Chapter 3 we might expect the latter of the two interpretations to be more accurate, but it makes sense to attempt a more thorough test before drawing this conclusion.

One way to deal with the above selection problem is to use the method proposed by Heckman (1979) to "correct" the initial regression results by including an estimate of the probability that we will observe an interest rate for a given state in a given period. The key requirement of this method is that it be possible to find empirical determinants of the likelihood that one will observe an interest rate for a given state, and confidence in the empirical model will be greatly increased if at least one of these is a factor that does not have a direct effect on the interest rate.[106] It is possible to combine the estimates from

[106] Technically the Heckman model can be identified due to the non-linearity in λ even if the variables in the two equations are identical. However, this introduces the possibility of severe multicollinearity in

Section 5.1's investigation of the determinants of creating a public debt with the estimates from Section 5.2 of interest rate determinants, to get a corrected estimate of the magnitude of the interest rate differential between city-states and territorial states (estimated using maximum likelihood).

$$\begin{aligned} \ln(i_{ijt}) &= \gamma_0 + \gamma_1 \ln(r^{\text{lr}}_{it}) + \gamma_2 \ln(\text{urban})_{jt} + \gamma_3 \text{life}_{ijt} + \gamma_4 \text{city}_i + \gamma_5 \text{represent}_{ijt} + \gamma_6 \widehat{\lambda}_{it} + u_{ijt} \quad (13) \\ \Pr(\text{debt}_{ijt}) &= \Phi(\beta_0 + \beta_1 \ln(r^{\text{lr}}_{it}) + \beta_2 \ln(\text{urban})_{jt} + \beta_3 \ln(\text{pop})_{ijt} + \beta_4 \text{city}_i + \beta_5 \text{represent}_{ijt} + \beta_6 1500) \end{aligned}$$

Confidence in these estimates depends upon the assumption that the post-1500 dummy and the variable for capital city size can be included as determinants of an interest rate being observed but excluded as determinants of the level of the interest rate. The former is particularly important because of the significance of the post-1500 dummy as a predictor of a state creating a debt. The problem of course is that this assumption may not be justified, as structural change after 1500 involving either the "military revolution" or an increased intensity of inter-state competition may have had a direct effect on interest rates on government debt, even after controlling for the other changes considered here including the decline in land rent returns and increased urbanization.

With the above caveat made clear, I considered whether the estimates of interest rate determinants remained similar when controlling for sample selection of this type. This was indeed the case, as the coefficients on the city-state dummy in the interest rate equation were remarkably close to those reported in the OLS estimates above. In addition, the coefficient γ_6 on the selection parameter λ was not statistically significant, suggesting that the two equations can be estimated independently.

The second selection problem referred to above is one of attrition - it may be that

the regression, and it also would raise questions whether the functional form is simply misspecified. See Wooldridge (2002 p.564) on this point.

certain types of states for which we initially observe an interest rate subsequently drop out of the sample because the state ceased to exist. This would not pose a problem for drawing inferences about the difference between city–states and territorial states if each type of state had a similar probability of ceasing to exist - it would simply imply that over time, one would be increasingly comparing territorial states and city-states that had been successful while ignoring the failures. But this assumption may be implausible There are many cases where city-states failed politically and were then absorbed by neighbors. There are fewer cases within the sample and time period considered here of territorial states disappearing.

If only successful city-states survived while unsuccessful territorial states did not disappear, then this would not technically result in a biased estimate of the interest rate differential between city-states and territorial states, because it would be the underlying population of states that is changing.[107] This might nonetheless alter the inferences one would make about the underlying factors of state size and the wealth composition of the political elite. Empirically, we do in fact observe that city-states are more likely to disappear from the sample than are territorial states. Moreover, it is also the case that city-states that borrowed at higher interest rates in previous periods, perhaps reflecting some underlying political weakness, are particularly likely to drop out of the sample. This same phenomenon is not observed for territorial states. In the regressions that I have reported so far the extent of this attrition effect is nonetheless attenuated by the fact that we do actually have interest rate observations available from many city-states that created public debts but eventually went out of existence, and these observations are already included in the interest rate regressions reported in the previous sub-sections. It is also the case that the city-state versus territorial state interest rate differential remained relatively constant,

[107] This would not be a case where the sample of a fixed population changes over time.

rather than increasing over time as this scenario might suggest.[108]

5.5 The Endogeneity of City-State Development

The regression results presented above suggest that city-states had a financial advantage over territorial states, and that after controlling for this difference we fail to observe an effect whereby territorial states with active representative institutions had better access to credit. I have interpreted this as being consistent with the core thesis of this book. I have argued that once a city-state formed, two features of politics - small size and a political elite holding liquid wealth - combined to favor the joint development of active representative institutions and a public debt. However, the statistical tests have so far have ignored what determined when and where city-states emerged. Failure to take account of the endogeneity of city-state development might bias the inferences I have drawn. Ultimately, independent of the issue of endogeneity bias, my empirical conclusions beg the question of why city-states originated in some areas and not in others. The following sub-section will attempt to confront this issue.

One endogeneity problem could involve a simultaneity bias whereby a transient factor would lead to both low interest rates on government debt and to a city being an independent state. However, as discussed in Chapter 4, we know that most city-states formed during a specific time period between 1000 and 1200 that witnessed the communal revolution in Europe. So whether a European city in 1500 or 1600 was an independent city-state was to a great extent something that depended on events that had taken place several centuries in the past. The regressions above also establish that the financial advantage of city-states is not something that existed temporarily during the 14th and 15th centuries only

[108] We can also consider an econometric correction for this attrition problem, which is to follow the strategy of Hausman and Wise (1979) by estimating the probability that a state which has already created a long-term public debt will drop out of the sample and then including this as an additional parameter in the interest rate regression. I performed this operation using several specifications for the selection equation.

to disappear after this point. It may certainly be the case that between the years 1000 and 1200 there were transient factors that allowed some cities to establish autonomous control of their political affairs while inhabitants of other cities were unable to do so.[109] My key point is that once these effects took place, no new city-states emerged.

If the observed correlation between state type and access to credit is not something produced by transient factors, it is still entirely possible that some set of initial conditions might have determined where city-states developed. Failure to take account of these initial conditions might bias my conclusions. The most likely possibility is that city-states emerged in regions that at an initial stage, say around the year 1000, were more economically developed and where the economy was more extensively commercialized. This idea has been emphasized by Tilly (1990). In Chapter 3 I suggested that when considering this possibility, though, one should take into account the fact that territorial states also often had large cities that were commercial centers. To the extent my statistical tests control for the contemporary level of development and commercialization of the economy, if Tilly's account is accurate it would nonetheless not pose a problem of endogeneity bias in my regressions. The level of development in the year 1000 should have no direct effect on interest rates except to the extent that it has influenced the current level of development. The problem, of course, is that in my regressions I have only very imperfect proxies for the current level of development. Another way to say this is that rather than having a potential problem of selection on an unobservable, I have a problem of selection on an observable that is measured with error. Given the undoubted measurement error in my proxies for the risk-free return on capital, this raises the possibility that the coefficient on the city-state dummy variable is simply reflecting the fact that the particular micro-region where a city-state appeared was more economically developed. Under these conditions the

[109] For example, the Investiture Struggle of the eleventh century between the papacy and the Holy Roman Emperors is often cited as being critical in leading to the independence of northern Italian cities.

borrowing advantage of city-states might have nothing to do with the particular pattern of politics within them.

In order to consider the above issue, we need to conduct an empirical analysis of the correlates of city-state development while also considering whether it is possible to address the endogeneity problem by identifying a valid instrumental variable - a factor that drove city-state development but which had no plausible direct effect on the future level of interest rates on government debt.[110]

One possible determinant of city-state development would involve geography and in particular proximity to water transport.[111] A city could have access to water transport if it was an oceanic port, or if it was situated on a major navigable river. Geography may have played an important factor in the pattern of city-state development within Europe, given the relative ease of water transport in the Low Countries, in the plain of Lombardy, and along the Rhine. But what this analysis overlooks is that many cities that eventually became part of territorial states were also often oceanic or riverine ports. In Table 8 I report a series of probit estimates of the correlates of city-state development based on the same sample of 31 states used throughout this book. Cases where a city became an independent state are coded as 1. Cases where a city instead became the capital of a territorial state are coded as 0. In one of these regressions I estimate the probability that a given city became an independent state as a function of whether it was an oceanic port or lay on a major navigable river. As can be seen, the coefficient on this variable in regression (4) is not statistically significant. Irrespective of whether access to water transport is a good predictor of city-state development, there are strong reasons to believe that it would not constitute a valid instrumental variable that could solve the potential

[110] More specifically, we need to identify an instrument that is uncorrelated with the error term in equation (12).

[111] See in particular Fox (1971).

endogeneity problem in my regressions. We would expect that access to water transport might be correlated with subsequent economic development and therefore potentially with the interest rate on public debt.

Table 8: The Correlates of City-State Development

	(1)	(2)	(3)	(4)	(5)
Distance from Meersen (kmx100)	-.328				-.416
	(.119)				(.135)
log i*initial urbanization (year 1000)*		-.018			.025
		(.237)			(.376)
log *initial city size (year 1200)*			.104		.278
			(.200)		(.347)
Oceanic port or major river				.065	-.063
				(.465)	(.528)
Wald chi^2	7.65	0.01	0.27	0.02	9.70
Prob>chi^2	p<0.01	p=0.94	p=0.65	p=0.89	p=0.046

Probit estimates, N=31, heteroskedasticity consistent standard errors

A second possible determinant of city-state development would involve the initial level of economic development in a region. As explained above, if initial economic development affects the subsequent level of economic development, and we cannot measure the subsequent level of economic development perfectly, then the initial level of economic development would not constitute a valid instrumental variable for my purposes. It may nonetheless have been an important determinant of city-state development. Tilly (1990) has argued that initial conditions present around the year 1000 were crucial for determining the subsequent pattern of state formation in Europe. State development according to Tilly followed a path-dependent process. In areas that were the most economically developed at this early stage "capital" tended to dominate over "coercion" in governance, and one

observes the subsequent development of independent cities as opposed to larger states held together by military force. He suggests that this high initial level of economic development characterized the same longitudinal band between Northern Italy and the Low Countries that was previously emphasized by Fox (1971) who focused on geographical determinants of city-state development.

A closer look at the evidence suggests that the correlation between the level of development in the year 1000 and future state type (city-state or territorial) may not actually be as high as Tilly suggested. Based on interpolations using the Bairoch, Batou, and Chevre (1988) database for urbanization, Van Zanden (2006) has recently constructed estimates for different European regions dating back to the Carolingian era. When taking estimated urbanization in the year 1000 as a proxy for Tilly's initial level of economic development, in the sample of states I consider, territorial states actually had a slightly higher average rate of urbanization in the year 1000 than did city-states (7.5% versus 6.5%). I next conducted a more systematic test, estimating the likelihood that a city would become an independent state as a function of the level of urbanization in the year 1000. As can be seen in regression 2 from Table 8, the urbanization rate constructed by Van Zanden (2006) is actually an extremely poor predictor of future city-state development. A closer look at several specific areas suggests why this may be the case. First, in the Low Countries it is true that a number of autonomous cities emerged in Flanders which had a high initial rate of urbanization, but it also true that autonomous cities emerged in the Netherlands which had a very low initial rate of urbanization. Second, while a number of city-states developed in Northern Italy, a region that was heavily urbanized from an early date, a series of territorial states like the Duchy of Milan and the Kingdom of Piedmont also emerged in this same region. I next considered whether an alternative measure for initial economic conditions - the initial population of a city - was a good predictor of city-state development.

As can be seen from regression 3 in Table 8 this does not appear to have been the case. It is in fact remarkable how weak is the correlation between these variables and subsequent city-state development.

If deterministic factors like access to water transport and initial economic conditions appear to be poor predictors of city-state development, it may have been the case that temporary or accidental factors played a more important role in shaping the future map of Europe. In other work (Stasavage, 2007) I have suggested that city-state development was heavily influenced by the pattern of the dissolution of the Carolingian empire during the ninth century. In the year 843 as part of the Treaty of Verdun, the Carolingian empire that covered much of Western Europe was divided into three separate territories: (1) West Francia which gradually evolved into France (2) East Francia which gradually evolved into Germany and (3) Lotharingia which covered a central portion of territory running from the present day Netherlands to Northern Italy but which never evolved into a single state. A range of authors including Pirenne (1915), Ganshof (1971) and Thompson (1935) have emphasized the importance of the Treaty of Verdun in shaping the future political development of Europe.

While in the years after 843 central authority receded throughout the Carolingian empire, quite arguably it collapsed most dramatically in Lotharingia, and it was this collapse of central authority that facilitated efforts by many cities in this area to subsequently establish political autonomy.[112] In the year 870 a new political division occurred at the Treaty of Meersen as the ephemeral kingdom of Lotharingia was partitioned between the rulers of West Francia and East Francia. What was formerly Lotharingia now became a border region in which central political authority was again likely to be particularly weak.

[112] This territory derived its name from its ruler, Lothar, who nominally retained the imperial title. Technically this region referred to as *Franca Media* comprised both Lotharingia and the Kingdom of Italy, but I will follow the usage of referring to the entire region under the control of Lothar as Lotharingia.

There was nothing preordained following the Treaty of Verdun in 843 that the kingdom of Lotharingia would quickly collapse in this fashion. Airlie (1998) makes a convincing argument that one important element helping to lead to the collapse of Lotharingia was the bitter divorce dispute of King Lothar II who ruled from 855 to 869. Inheritance in the Frankish kingdoms did not yet follow a rule of primogeniture, which made the survival of kingdoms more susceptible to idiosyncratic dynastic succession disputes.[113]

While the full original text of the Treaty of Verdun has been lost, the subsequent partition at Meersen in 870 remains more fully documented, in particular due to the extensive efforts of Thompson (1935). There was no precise territorial dividing line established by this treaty, as the settlement consisted of a division of specific crown assets. Like the division at Verdun, however, the partition at Meersen was one where assets were divided roughly according to a line of longitude. If we take the longitude of the town of Meersen (5.75°E) as a divider, then we can see that a line running north-south through this point serves as a very good proxy for the frontier between the territories of West and East Francia, with this line running through the center of the former kingdom of Lotharingia.

If we logically expect that central political authority would have been weaker in this frontier area and that in subsequent centuries cities would therefore have found it easier to establish political autonomy, then the distance (east or west) from Meersen should logically serve as a predictor of city-state development. As can be seen from regression 1 in Table 8, the distance from the dividing line at Meersen is in fact a very strong predictor of future city state development. Based on this regression a city lying on the 5.75°E line would have a 90% probability of becoming an independent city-state. A city 300 kilometers from the line would have a 62% probability of becoming a city-state. This is equal to the unconditional probability one would assign to a city from this sample becoming a city-state if one took no

[113] See Sharma (2005) for a consideration of the role of the institution of primogeniture in establishing political stability in early modern Europe.

account of the distance from this dividing line. When the *distance from Meersen* variable is added to a specification that includes the three other potential predictors of city-state development (regression 5 from Table 8) we obtain a very similar result. Finally, another indication of the relevance of the Meersen dividing line is that when we progressively shift the dividing line either to the east or west, at no point is there a longitudinal dividing line that provides a better statistical prediction of city-state development.

In addition to being relevant as a predictor of city-state development, there is some reason to believe that the variable *Distance from Meersen* satisfies the necessary exclusion restriction for an instrumental variable. First, it is not significantly correlated with the variables referred to above measuring access to water transport or initial city size. The *Distance from Meersen* variable is significantly correlated with initial urbanization, but if we include initial urbanization as an additional control in both the first and second stage of any instrumental variables estimates, we can rule out the possibility that the *Distance from Meersen* variable is an invalid instrument because it is correlated with initial urbanization.

The second reason the *distance from Meersen* variable is likely to satisfy the exclusion restriction is that the location of the Meersen dividing line was dictated to a great extent by temporary political exigencies rather than existing boundaries. Historians like Thompson (1935) and Ganshof (1956 [1971]) have emphasized that even if the settlements at Verdun in 843 and Meersen in 870 had clear long lasting effects, as they helped lead to the development of France and Germany, neither of these treaties had anything to do with the prior emergence of homogeneous ethnic groups or national sentiments in any territories. The division at Verdun was instead largely dictated by patronage considerations involving the desire to establish three relatively equally-sized territories, each of which had similar economic resources.[114] The division at Meersen was motivated by similar considerations.

[114] See in particular the detailed evidence in Thompson (1935) on this point, in addition to the discussion by de Planhol (1994).

Though there are reasons to believe that the *Distance from Meersen* variable can be legitimately excluded from the interest rate equation, it should be emphasized that there are also several reasons why this may not be the case. First, if distance to this line is indeed an indication of whether a city is in an area that is politically fragmented, then some authors have argued that political fragmentation in Europe during this period may have helped spur economic development in general.[115] To the extent this is true, it would imply that the *Meersen* variable may fail the exclusion restriction for the same reason as the above variables measuring initial economic development. More fundamentally, we have no assurance that the *Distance from Meersen* variable is picking up the theoretical channel that I have outlined above, as opposed to some other factor, or group of factors, that may have simultaneously influenced economic development and thus the level of interest rates.

With the above words of caution about the exclusion restriction in mind, I performed a series of instrumental variables estimates of the cost of borrowing, with the city-state dummy variable instrumented by the distance (east or west) from Meersen. In order to increase confidence that the distance from Meersen is not simply proxying for initial economic conditions, I also included the additional initial conditions variables described above including a city's initial size, the variable for initial urbanization, and a dummy variable for access to water transport as additional variables. Once these additional variables are included in equation (12), we can be more confident that the *Distance from Meersen* variable would be uncorrelated with the error term in the same equation.

The instrumental variables estimates are reported in Table 9. The results regarding the city-state dummy variable, the representative institutions variables, and in fact all other variables in the regressions are very close to those obtained in the OLS estimates reported in Table 6. The one exception here is regression (5), but in this case the results are no doubt

[115] See in particular Van Zanden (2006) for a recent exposition of this view.

Table 9: Instrumental Variables Estimates of the Cost of Borrowing

	(1)	(2)	(3)	(4)	(5)	(6)
land rent return	1.17	.998	1.04	1.07	1.87	1.02
	(0.34)	(.247)	(0.24)	(0.25)	(1.99)	(0.23)
urbanization	-.001	-.003	-.006	-.008	-0.72	-.015
	(.130)	(.117)	(.122)	(.126)	(1.61)	(.123)
life annuities (dummy)	.434	.433	.468	.447	.857	.420
	(.157)	(.151)	(.167)	(.160)	(1.10)	(.151)
city-state (dummy)	-.530	-.445	-.519	-.491	-3.54	-.535
	(.243)	(.174)	(.251)	(.190)	(7.14)	(.256)
assembly existed		.155				
		(.151)				
assembly approves taxes			.176			
			(.208)			
assembly administers taxes				.069		
				(.131)		
assembly administers debt					2.73	
					(6.09)	
frequency of meetings						.259
						(.258)
initial size (year 1200)	-.043	-.039	-.031	-.038	.071	-.039
	(.050)	(.044)	(.052)	(.051)	(.304)	(.047)
initial urbanization (1000)	-.072	-.054	-.049	-.057	.321	-.030
	(.094)	(.083)	(.087)	(.092)	(.868)	(.090)
oceanic port or major river	-.149	-.198	-.200	-.158	-.332	-.221
	(.114)	(.107)	(.114)	(.113)	(.420)	(.117)
constant	.123	.240	.181	.213	-0.25	.186
	(.653)	(.543)	(.584)	(.560)	(2.02)	(.578)
R^2	.433	.470	.456	.462	-1.65	.466
Partial R^2 for *Meersen* (1st stage)	.140	.289	.286	.311	.003	.183
Prob>F for *Meersen* (1st stage)	p<0.01	p<0.01	p<0.01	p<0.01	p=0.59	p<0.01

N=102, Heteroskedastic-consistent standard errors in (), adjusted for clustering by state.
City-state is instrumented with the *distance east or west from Meersen*

influenced by the very high correlation between the *city-state* and *assembly administers debt* variables. The coefficients on the *city-state* dummy variable are uniformly negative and larger in magnitude than in the OLS regressions though this difference in coefficients between the OLS and IV estimates is generally not statistically significant. In regressions 1-4 and 6 we also observe that the partial R^2 for the excluded instrument is sufficiently high that the regressions are unlikely to be biased by a problem of weak instruments.[116]

Finally, beyond the question of the endogeneity of city-state development, one might also ask whether representative institutions more generally might be endogenous to factors other than those that I have already emphasized, and whether this might bias my statistical conclusions. Within the group of territorial states, the most plausible possibility, which has already been referred to in Chapter 4, is that princes only consented to having an active assembly when they were in a position of financial weakness or in times of financial crises. Since financial crises that occur for exogenous reasons might also be associated with higher interest rates, this could create a biased inference, leading one to underestimate the effect of strong representative institutions in lowering interest rates on public debt. In the sample I have considered here this possibility is alleviated in part by averaging interest rates over a fifty year period - it was rare for financial crises to last this long. More importantly, if this is the form of bias one is concerned about, it suggests using the lagged value of the representative institutions variables as instruments for current values. When I did this I obtained very similar results to those reported above. Using lagged values as instruments does not of course eliminate the possibility that fixed country conditions are biasing the results, but that is not the source of bias implied in this particular case.

[116] Given that we have an exactly identified system of equations with only one excluded instrument, we cannot use a standard test of overidentifying restrictions to to help test whether the *Meersen* instrument is valid.

5.6 Summary

In this chapter I have combined my statistical evidence on the evolution of public credit and on the emergence of representative institutions, in order to draw conclusions about the link between debt and representation. The statistical tests suggest that the development of public credit did indeed tend to accompany the development of representative institutions, but this phenomenon happened almost exclusively within city-states. This supports the idea that the development and evolution of both debt and representation were dependent on underlying conditions. I have argued that small size and the wealth composition of the political elite were particularly important in this regard. Once one looks beyond the group of city-states, one sees little evidence in territorial states of a statistically significant association between the prerogatives of a representative assembly and the evolution of public credit. The goal of Chapter 6 and 7 will be to consider the same issues regarding the politics of public credit for a much smaller set of city-states and territorial states, providing a closer look at the mechanisms at work and the extent to which they are consistent with my core argument.