The Emergence of the Corporate Form

Giuseppe Dari-Mattiacci, Oscar Gelderblom, Joost Jonker, and Enrico Perotti[1]

Abstract

We show that the business corporation emerged in the 17th century out of the need to commit capital for the long term in order to profit from the new trade opportunities offered by sea-trade with Asia. The commitment of capital became possible due to a legal, not a contractual, innovation, since contracts to lock in capital were previously not easily enforceable in court and uncommon among sea-traders. This legal innovation emerged only where and when political institutions protected investors from the risk that their locked-in capital could be expropriated at a later stage by the political power. The Dutch East India Company, chartered in 1602, was the first business corporation with permanent capital due to the aptitude of the Dutch Republic's political institutions, which restrained political leaders. The English East India Company was chartered earlier, in 1600, but obtained permanent capital only in 1657, after the Civil War, when the power of the crown and the related risk of expropriation were put under strong parliamentary control. These different organizational models had profound and measurable effects on the performance of the two companies, and especially on their ability to make long-term investments.

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1. Introduction

The world's biggest and most powerful firms, from Apple to Zurich Insurance Company, are corporations. A corporation is a firm with special legal attributes[1] that make it capable, among other things, of owning property, entering into contracts, and standing in court independently of the individuals behind it, such as owners, managers and employees. The theory of the firm (Grossman and Hart 1986; Hart and Moore 1990) focuses on asset ownership as a way to allocate residual control rights within the firm but does not explain whether firm assets should be owned by a real person (the entrepreneur) or by a fictitious legal person (the corporation). In particular, this theory leaves three important questions open:

1) Among the many features of the corporate form, what is the critical attribute that makes a corporation different from other firms?
2) What is the role of the law and are contracts not enough to provide a firm with corporate status?
3) If contracts are not sufficient, then how did legal innovation occur, that is, when, how and why did the law provide for the corporate form?

For a long time, economics and legal scholarship have addressed these questions by viewing the corporation as a nexus of contracts and corporate law as a menu of default contractual arrangements (Jensen and Meckling 1976: 310-11; Easterbrook and Fischel 1991). This approach gives the law a merely facilitating, if not trivial, role and veils the "significance of the allocation of property rights to [productive] assets for the governance of the enterprise" (Armour and Whincop 2007: 431).

More recently, the theory of legal entities (Hansmann and Kraakman 2000a and 2000b; Hansmann et al. 2005 and 2006) has clarified that the law is essential in providing the corporation with a defined pool of assets, shielded from the personal creditors of the owners. This approach emphasizes property rights and is very close to the spirit of the theory of the firm.[2] Importantly for our analysis, corporate assets are shielded also from the owners: by joining a corporation investors wave the right to

[1] Vice versa, not all corporations are firms. Think of a monastery or a municipality. Yet, we focus on business corporations, which are all firms. For a survey of the economic theories of the firm see Foss et al. (2000).

[2] At a very abstract level, both theories are based on a ranking of claims on firm assets. Note, however, that the notion of property rights used in economics does not perfectly overlap with the legal notion of property right. In economics, a property right is characterized by residual control rights on assets, that is, the right to use and dispose of the assets at will once all contractual claims have been honored. Under the law, a property right is defined as a right that "runs with the asset", that is, "a property right in an asset, unlike a contract right, can be enforced against subsequent transferees of other rights in the asset" (Hansmann and Kraakman 2002). Importantly, a property right can be enforced against third parties, beyond any contractual relationship. Residual control rights are typically associated with ownership but might not be an important feature of other types of property rights.

unilaterally withdraw their capital.[3] Through the corporate form the law provides a way for investors to commit capital for the long term—and often indefinitely—to a business venture. Partnerships do not offer the same level of commitment (Blair 2003).[4]

In this article, we propose an integrated theoretical framework informed by the available historical data and explain the emergence of the corporate form as a way to commit capital for the long term. Our starting observation is that there is a trade-off between an individual investor's control over the capital invested in a firm—which is enhanced by the right to withdraw at will—and the firm's ability to follow profitable long-term strategies—which requires capital to be committed for the long term (Lamoreaux and Rosenthal 2006).

In an environment where economic activities do not require long-term investment or where the narrow circle of family and kin can supply enough capital, this trade-off does not arise. The largest Florentine banking businesses of the 14th and 15th century were ran by families: Bardi, Peruzzi and Medici (Hunt and Murray, 1999). In contrast, the trade-off needs to be addressed when new economic opportunities materialize, requiring massive investments for the long term. Historically, the onset of Atlantic trade in the 16th and 17th century provided such an opportunity for large-scale long-term investments (Acemoglu et al. 2005). The collection of capital from a vast number of investors outside the safety of family circles brought about two sets of problems. One is the enforceability of the commitment to invest in the business for a long term; the other is the risk of expropriation of the capital invested.

We start from the first problem. Traditional Roman partnership law adhered strictly to the principle of exit at will, which gave each individual partner the right to force the liquidation of the partnership. This principle prevented parties from credibly agreeing to remain in a partnership for the long term: lock-in contracts were not easily enforceable in court. Overcoming this limitation and hence unlocking the potential of long-term lock-in of capital in a company required a legal (not merely contractual) innovation. This legal innovation was the corporate form.

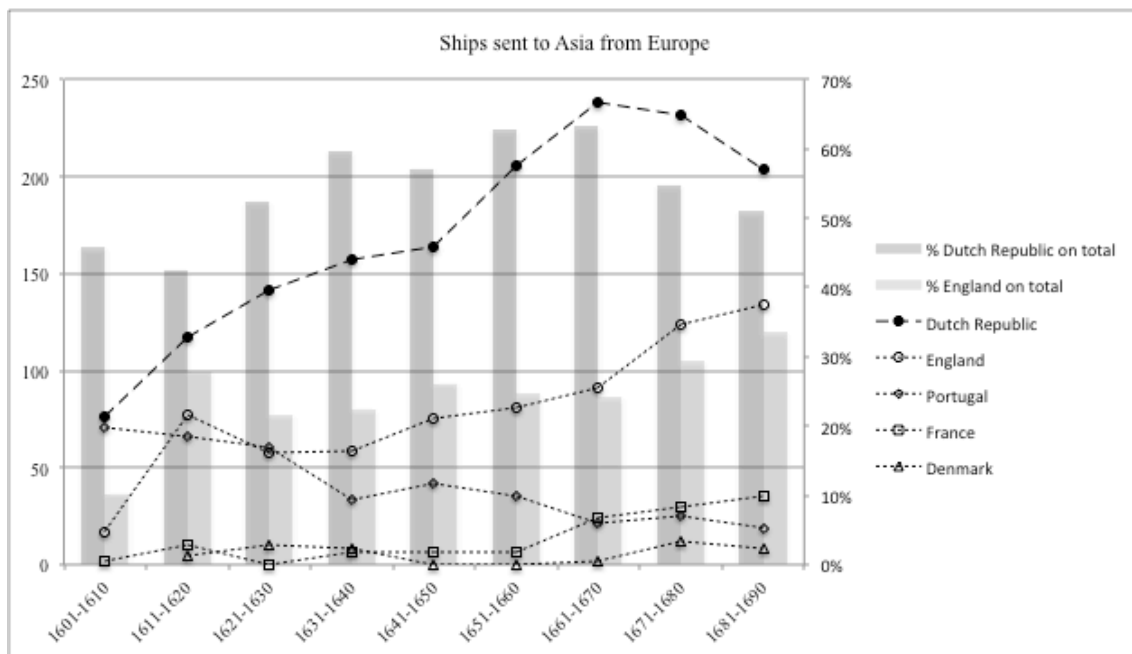
Yet, while making the commitment of capital possible, legal change could not reduce the risks associated with the ensuing loss of control. In particular, at a time when most European countries were ruled by absolute monarchs, there was a real risk that resources be diverted from trade to other goals (principally, war) at the king's will. Therefore, we expect to observe the emergence of the corporate form only where and when the risk of expropriation by the central power was relatively low due to a country's suitable political institutions.

[3] Note that the sale of shares does not amount to a withdrawal, since the capital remains locked in the corporation, only the identity of one of the owners changes. As Hansmann et al. (2006: 1338) clarify, withdrawal from a corporation is only possible by a majority or supermajority of the shareholders.

[4] Under current American law, for instance, the commitment not to withdraw capital from a partnership is enforceable only if it is stipulated for a limited period of time (Hansmann et al. 2006: 1393).

The historical evidence supports this account. The origin of the corporate form is commonly associated with the chartering of the Dutch East India Company, the *Vereenigde Oost-Indische Compagnie* (VOC), in 1602 in Amsterdam. England had chartered a similarly named *East India Company* (EIC) two years earlier, in 1600. Both companies were motivated by the prospects of enormous gains from trade with Asia. Newly discovered oceanic routes pioneered by the Portuguese made it possible to bypass the middlemen operating along the land routes to the Far East that had been used for centuries. The prospective gains were unprecedented.

Figure 1. Ships sent to Asia from Europe, 1600-1690 (number of ships). (Source: De Vries 2003; Flynn et al. 2003: 36-105.)

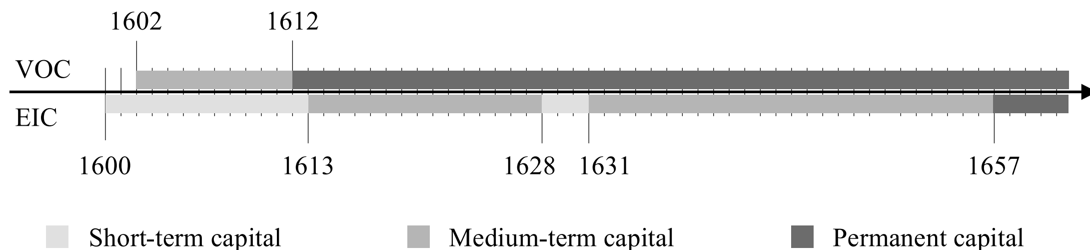


However, the two companies differed radically in an important dimension: the chartering of the VOC was accompanied by a game-changing legal innovation that the English could emulate only half a century later, enough for the Dutch to pull ahead and outperform the English and everybody else who tried to compete with them. The dominance of the Dutch is clearly visible in the number of ships they sent to Asia relative to other countries in the 17th century, the period on which we focus (Figure 1). In a century, the Dutch sent more ships to Asia than all other European countries taken together or, more precisely, 55% of the total. England, its closest competitor, totaled less than half of that amount, starting to close the gap only in the second half of the century.

The 1602 VOC charter—which had the force of law—included a provision that was absent in the 1600 EIC charter. The VOC charter locked in investors' capital for the long term. The lock-in was initially set for only 10 years but became permanent in 1612. Capital lock-in broke dramatically with pre-existing commercial practice. Dutch traders

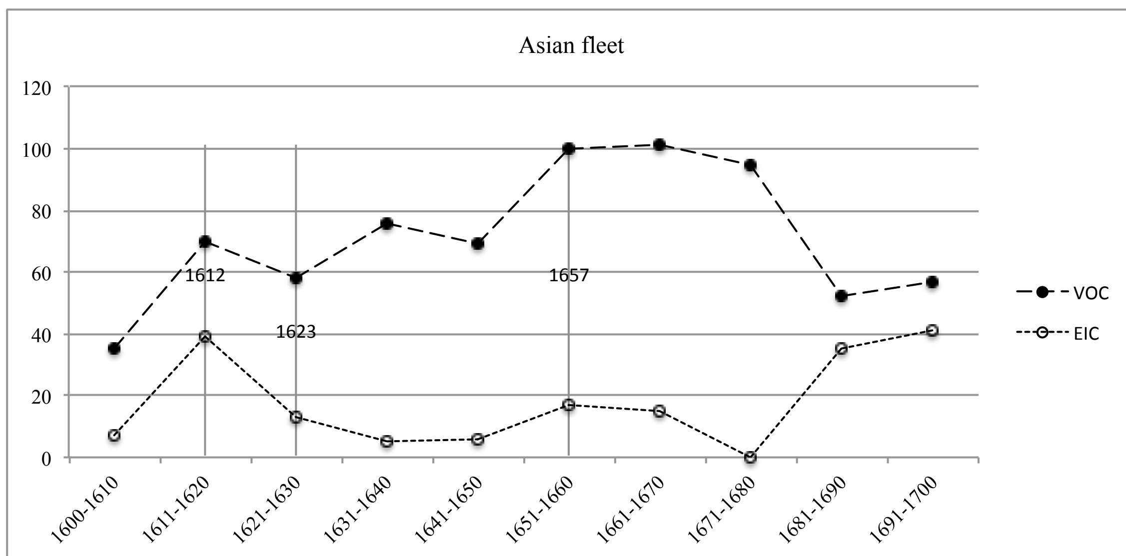
before the chartering of the VOC only committed capital for a single voyage, and they could not do otherwise as courts adhered to the traditional Roman law principles of exit at will. English traders and the EIC were subject to this constraint much longer, until the middle of the 17th century (Figure 2).

Figure 2. Capital structure of the VOC and the EIC.



The different maturity of equity in the VOC and the EIC resulted in measurable differences in their investment strategies in Asia. In particular, the VOC could finance an impressive permanent Asian fleet, which serviced and protected successive trading fleets sailing rapidly from Europe to Asia and back. In stark contrast, the EIC had a much smaller permanent Asian contingent (Figure 3).

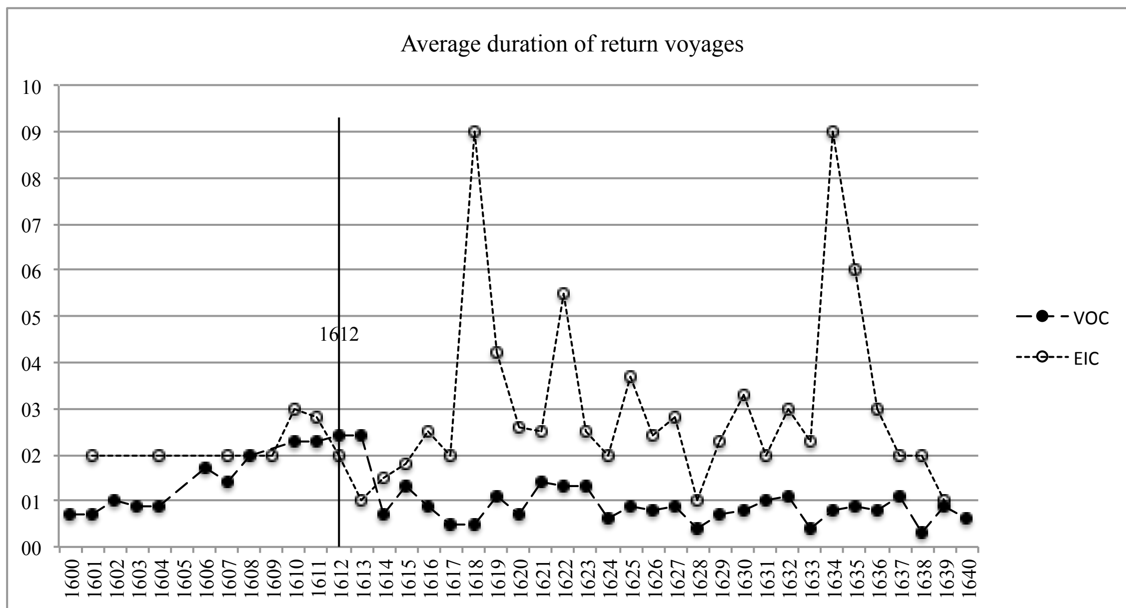
Figure 3. Asian fleet 1600-1700 (number of ships). Source: Bruijn et al. (1979-1987); Chaudhuri (1965; 1993); Steensgaard (1982); Van Dam (1927).



Initially, each EIC trading fleet was a different enterprise with potentially different funders. Investing in a permanent Asian fleet generated a free-riding problem: Asian investments made by one group of funders would have benefitted other groups of funders. This problem was absent in the VOC because all fleets had the same funders. Moreover, the EIC trading fleets were slower to come back than their VOC competitors (Figure 4) because, for want of an EIC Asian fleet, they were also assigned to patrolling

and inter-Asian trade, two tasks that were more efficiently performed by the VOC Asian fleet, contributing to Dutch dominance in the area.[5]

Figure 4. Average duration of return voyages 1600-1640 (years). Source: Bruijn et al. (1979-1987); Chaudhuri (1965; 1993); Steensgaard (1982); Van Dam (1927).



The English had soon come to admire the Dutch model of locked-in capital and reinvestment of earnings:[6]

> "[I]t was the policy and wisdom of the Hollanders by this way to advance the small stock which they raised at first to that greatness which now it is, by forbearing divisions, which course, if this Company observe, [the Governor] doubted not to improve it for the good of the Company." (Court Book, XIV, 354, 20 June 1634)[7]

Yet, the EIC failed to introduce capital lock-in until 1657 (Chaudhuri 1965: 223; Harris 2005: 45). Why? Along the lines of Demsetz (1967) and North (1980), we view institutional change as a convergence of strong interests to take advantage of an economic opportunity. However, colonial trade was an opportunity for many potential competitors in the Asian race. By 1600 the Portuguese and Spanish had been active in it for almost a century, the British and other powers got involved at the same time as the Dutch (De Vries 2003). Why did the corporate form arise first in Amsterdam, and why

[5] On the debate on the efficiency of the organizational model adopted by the early trading companies of the 17th century see Jones and Ville (1996a and 1996b) and Carlos and Nicholas (1996).
[6] For the EIC, the VOC was a role model for commerce, empire building, fortifications, and the use of religion in governing the Asian territories until the decline of the VOC in the 18th century (Stern 2011: 49, 60, 63, 72, 80, 86, 89, 94, 102, 103, 114, 117, 122, 128, 197).
[7] Cited in Chaudhury (1965: 222).

was it not adopted elsewhere for decades?

The reason was the peculiar political economy of the Dutch Republic. Since colonial trade had military implications for monarchs, their authority shaped its organization. In Spain and Portugal, two strong and cash-rich monarchies, colonial trade was an outright royal monopoly, while in England private merchants played an auxiliary role in organizing and financing individual expeditions. Under such strong kings, traders ran the risk that their investments could be diverted to military goals or expropriated outright. In contrast, in 1581, the Low Countries had abjured their Habsburg ruler, the Spanish king Philip II, and consequently established themselves as a republic with a federal structure and a limited central power responsive to commercial interests. Since the risk of expropriation by the government in the Dutch Republic was low, traders were willing to commit their capital for the long term and delegate virtually all decisions to a small board of 17 VOC directors.

In the first half of the 17th century, the English crown operated dictatorially and free of parliamentary control; private property rights were insecure (Jha 2015). In particular, the English king afforded the EIC monopoly of trade with Asia rather weak protection, occasionally chartering competing companies and tolerating frequent infringements by private parties. The VOC monopoly, instead, was inflexibly enforced. Things changed when, following the Civil War (1642-1648), the power of the English crown with respect to war and taxation was significantly limited.[8] Consistently with our theory, in 1657 the new EIC charter granted by Cromwell provided the company with permanent capital. The Glorious Revolution (1688) crystallized these political changes (North and Weingast 1989; Harris 2009; Cox 2012).[9]

As a result of its early advantage, the VOC maintained a dominant role in South-East-Asian trade. As early as 1635 it had become clear to the British, Spanish, and Portuguese that the Dutch dominated the Indonesian archipelago to such an extent that they started looking elsewhere for expansion, which in the British case meant India (Witteveen 2011). This advantage was quite persistent; even by 1795—that is, five years before ceasing to exist—the VOC had sent 4,785 ships totaling 3.4 million tons to Asia, whereas the EIC had only managed 2,690 ships totaling 1.4 million tons (De Vries 2003) (Figure A3).

Our analysis supports the view in Acemoglu et al. (2005) that colonial trade had a positive impact on reinforcing property rights for emerging classes in less autocratic European countries, and was conducive to their economic development. While their work offers a broad cross sectional evidence, here we show in detail how the property

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[8] Jha (2015) also documents the effect of shareholdership in joint-stock companies on the increased support for Parliament in the years leading to the Civil War.

[9] For the recent debate on this view, see Clark (1996); Epstein (2000); O'Brien (2001).

rights[10] supporting the VOC corporate form became established over time as political institutions evolved, with England catching up with the Dutch Republic by the second half of the 17th century.[11]

The detailed chronicle of the gradual coalescence of the corporate form in the formative years of the VOC corroborates the view that rules restricting claims on firm assets are more important and emerged earlier than limited liability, protecting the personal assets of the investors from firm creditors. Rules restricting claims on firm assets by the investors' personal creditors (weak entity shielding) were an established principle by the time of the VOC. The 1602 charter further restricted claims on firm assets by individual investors and prevented them (and their creditors) from forcing the liquidation of the company—that is, locked in their capital—for 10 years. In 1612, as we will explain in detail, this commitment became permanent. Importantly, the 1602 charter also established a procedure for the transfer of shares, which effectively gave birth to the first stock market in history. This provision was a direct consequence of the lock-in of capital as it was necessary to balance the loss of liquidity ensuing from lock-in.

In contrast, full limited liability was not introduced until 1623; before that date, only passive shareholders were limitedly liable, while managing shareholders bore full personal liability for company debts. Hansmann and Kraakman (2000a: 428-32) and Hansmann et al. (2006: 1340-43) have shown that, while restricting claims on firm assets requires legal intervention, limited liability can also be achieved by contract. Indeed, while the VOC charter (a legal innovation) was used to do the former, full limited liability was achieved by rewriting the VOC bonds (a contractual innovation). Only later did limited liability morph into a default legal attribute of the corporation. Lock-in, entity shielding, tradable shares and limited liability are complementary components to the corporate "package" (Hasmann et al. 2006: 1378); our historical analysis shows that these components were assembled in stages over the course of 20 years.

This article is organized as follows. In Section 2, we articulate the theoretical underpinnings of our analysis and highlight the most salient historical facts. In Section 3, we examine the legal history of the corporate form in the VOC and show that capital lock-in was the fundamental legal innovation in the process of coalescence of the features that we now consider key to the corporate form. In this section we also examine

[10] As will be clarified in what follows, the legal innovations necessary to support the VOC corporate form were property rights and hence were opposable to third parties irrespective of any contractual agreement. In contrast, contracting institutions had long been in place before the rise of Amsterdam (Gelderblom 2013). See also note 2.

[11] See also Puga and Trefler (2012) showing that the exogenous availability of more profitable trade opportunities had a positive but reversible effect on the quality of political institutions in medieval Venice. Initially, trade opportunities enabled merchants to obtain constraints on the executive. Later, the richest families used the wealth produced by trade to block political competition and limit entry.

the various stages that characterized this process. In Section 4, we examine the economic history of the corporate form and, in particular, we read through the surviving historical evidence on the internal organization and performance of the VOC and the EIC, and the environment in which they operated. In Section 5, we conclude. The Appendix contains additional graphs.

2. Theory and implications

2.A. The components of the corporate form

The corporate form provides a company with legal personality, so that it can have an autonomous life independent of its investors. This requires the presence of a series of features (Armour et al. 2009: 5-15; Blair 2003 and 2013):

1) *Representation* (*agency*)[12] enables a principal to give an agent authority to enter into contracts in his name so that, for example, if the agent purchases a good from a seller, the property of the good and the liability for the payment of the price accrue directly to the principal rather than to the agent.
2) *Entity shielding* protects company assets from the personal creditors of the owners. Absent entity shielding, company assets are just a jointly owned pool of assets and hence can be freely attached by personal creditors. Weak entity shielding only gives company creditors priority over personal creditors on company assets, while strong entity shielding also prevents personal creditors from liquidating the company. Importantly, strong entity shielding also prevents individual owners from withdrawing their capital and forcing the liquidation of the company.[13]
3) *Capital lock-in* allows owners to commit capital for the long term. Absent lock-in, exit from a company is at will and hence each of the partners can force the liquidation of the business.
4) *Tradable shares* enable exit without withdrawing the capital.
5) *Limited liability* protects the owners' personal assets from company creditors. If liability is unlimited, company creditors can freely attach personal assets.

These features allow the corporation to operate as a legal person. Representation,

[12] Note the difference between the legal notion of agency and the way in which the term agency is used in economics. For instance, the latter does not imply that the agent has the authority to legally bind the principal.

[13] Hansmann et al. (2006) also identify a third form of entity shielding: complete entity shielding, which places company assets entirely out of the reach of personal creditors. Complete entity shielding is typically available to trusts and non-profit corporations and hence is not relevant for the purposes of our analysis.

while introducing some potential problems—the agent might for instance misrepresent the scope of his authority to a third party—makes trade more expedient, especially when the principal is a company rather than an individual.

Entity shielding and limited liability partition assets in two distinct sets: company assets and personal assets of individual owners. Limited liability protects the personal assets of the owners from company creditors. In contrast, entity shielding protects company assets from personal creditors of the owners. Restricting claims on company assets (entity shielding) has been shown to be more important than restricting claims on the owners' personal assets (limited liability) because it has a greater impact on the ability of the company to borrow and continue to operate. In addition, limited liability is also easier to implement: while limited liability can in principle be realized by contract, entity shielding is a property right, which requires the law and cannot be easily mimicked through contractual arrangements (Hansmann and Kraakman 2000a; 2000b). Limiting tort liability—as opposed to contractual obligations—by contract is more complex, but the explosion of tort claims is a very recent phenomenon (Hansmann et al. 2006: 1341 fn. 15).

While weak entity shielding only gives company creditors priority over personal creditors on company assets, strong entity shielding adds a rule of liquidation protection that extends to owners. Yet, liquidation protection is effective only as long as the owners' commitment to keep their capital locked in the company is enforceable. When this commitment expires, the company loses strong entity shielding; then, the owners and their personal creditors can force the liquidation of the company.[14] We stress the following analytical distinction: the ability to commit capital for the long term (lock-in) is a necessary condition for liquidation protection against owners and their personal creditors (strong entity shielding). Our analysis focuses extensively on the possibility for owners to commit their capital and on the duration of this commitment.

A long-term lock-in of capital also implies a relevant loss of liquidity and requires tradability of shares as a counterbalancing exit option. Crucially, tradable shares allow an investor to exit without withdrawing his capital. Within this conceptual framework, the enforceability of the owners' commitment to keep their capital locked-in functions as a catalyst for the simultaneous development of both strong entity shielding against personal creditors (a necessary legal implication) and tradability of shares (an economic necessity). Full limited liability is not an essential part of this cocktail and one that can be added by the parties directly through appropriate contractual arrangements.

Our historical analysis will therefore focus primarily on the enforceability of the commitment of capital and verify mode and timing of legal innovations in the VOC,

[14] Hansmann et al. (2006: 1338; 1349 fn. 39) show that liquidation protection against owners, although conceptually distinct, is usually paired with liquidation protection against creditors.

which occurred roughly in the order in which we list them above. We will show in Section 3 that the principle of representation, weak entity shielding and limited liability for passive shareholders had already been developed by the time of the VOC. The crucial legal innovation in 1602 was a medium-term lock-in of capital, enough to trigger immediately strong entity shielding and tradability of shares. In 1612 this commitment became permanent. Full limited liability of managing shareholders was added only in 1623 and, importantly, by means of a contractual, not legal, innovation.

2.B. The political economy of the corporate form

Legal innovation made investors able to commit their capital for the long term, but what made them willing to do so? Put differently, what created a demand for legal innovation? And what accounts for the supply side, that is, for the willingness of the political power to supply such rules? In this section, we formulate our political-economy theory of the emergence of the corporate form. Our conceptual model will have comparative-history implications as we will be able to shed light on the question why the corporate form emerged in a small set of countries in a particular moment in history and not elsewhere or at a different time.

We claim that the discriminant between countries that did and countries that did not develop the corporate form is the sudden appearance of extremely profitable trade opportunities combined with the presence of political institutions able to suppress the risk of expropriation by the ruler. In turn, traders' demand for legal innovations met the rulers' willingness to supply them, since part of the investment could be diverted to war efforts. Crucially, that part had to be small enough for traders to participate.

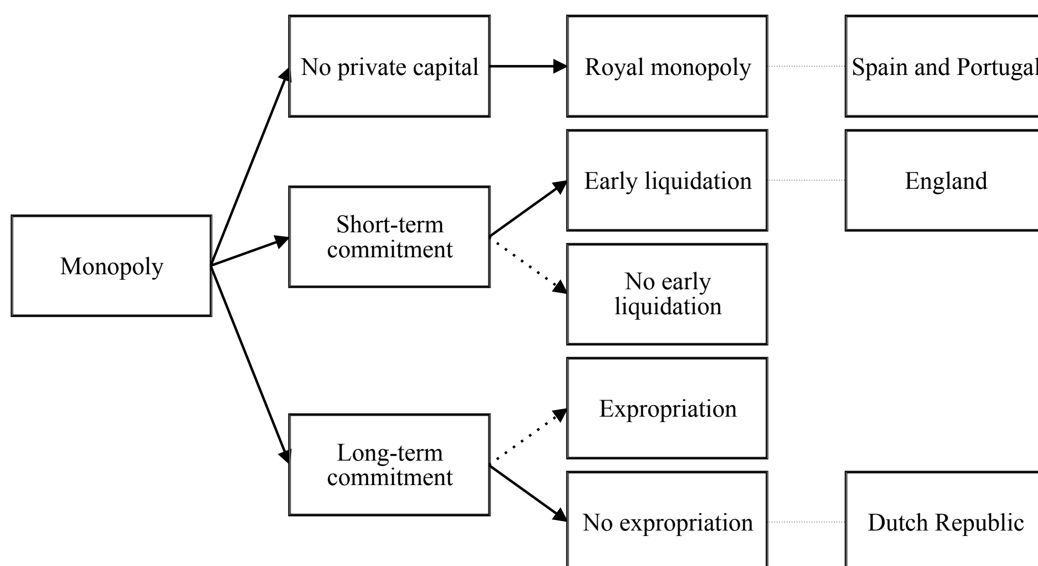
Absent trade opportunities, long-term capital lock-in is simply not desirable. In turn, when it is efficient to pool resources, the ability to lock-in capital allows traders to pursue long-term investment strategies, which in turn yield larger profits. All countries involved in the Asian trade chose to run it through a monopoly, a testimony to the fact that pooling resources was the best way to exploit it. Yet, pooling resources also causes some problems.

Berle and Means (1932) have shown that pooling resources and committing capital to a business venture generates agency costs. Yet, the problem of managerial "negligence and profusion", which had been already noted by Adam Smith and his contemporaries (Amsler et al. 1981: 781) cannot explain the sharp variation in financing models that we observe. While Spain and Portugal ran the Asian trade through state monopolies, England and the Dutch Republic set up monopolistic but privately-owned companies. Yet, there is no reason to believe that English and Dutch managers were to be trusted more than Spanish and Portuguese ones. In fact, the VOC management was famously corrupt, so much so that the company was said to have "perished by corruption" (abbreviated in Dutch as VOC).

The trade-off that we identify between long-term investment and the investors'

loss of control over their capital is not due to managerial agency costs or minority oppression as in Lamoreaux and Rosenthal (2006), but rather to a risk of expropriation by the political power. Countries where the expropriation risk was highest (Spain and Portugal) ran the Asian trade through a state monopoly. A strong crown that can muster the necessary resources is also too strong to be entrusted with private capital. When the expropriation risk is lowest and hence where the central government has limited power (the Dutch Republic), private capital is both necessary and easy to collect. Traders do not fear expropriation and are willing to lock-in their capital for the long term. At intermediate levels of expropriation risk (England, in the first half of the 17th century),[15] the central power is not strong enough to muster the resources to run colonial trade directly but too strong to be entrusted with permanent capital. Trade is run through short-term partnerships, which have the advantage to limit the risk of expropriation as traders can exit at will at the return of the fleet (or after the expiration of a short time period). However, such companies are unstable and subject to early liquidation and hence less profitable than they would be if they could rely on permanent capital. Figure 5 illustrates our stylized model of organizational choice in a static environment.

Figure 5. A simple model of organizational choice.



To be sure, since legal innovation had to be supplied by the state, it had to coincide with a public interest in setting up such enterprises. Both in England and in the Dutch Republic the gains from trade with Asia were broader than the financial yields of the Asian companies. Following a long tradition that dates back to Roman times,[16]

[15] In France and Denmark, where the king had an intermediate degree of power, the solution resembled the early English model of repeated trade voyages with short capital commitment, run by private partnerships occasionally paying dues to the king for the privilege of an uncertain monopoly (Findlay and O'Rourke 2007).

[16] See The Digest of Justinian (Watson (2009) at D. 3.4.1 pr.

corporations had always been public institutions, public utilities and, only occasionally, public contractors.[17] Private businesses were conspicuously excluded. The private enterprises that pursued the Asian trade broke with this tradition while retaining a certain measure of public responsibilities. In the Dutch case, having revolted against Spain in 1581, the state had crucial survival motives for chartering a company that would challenge its Spanish enemies abroad and hence relieve the Dutch Republic from direct military pressure. In England, the state interest in expansion was evident throughout the history of the EIC, which slowly morphed into England's colonial empire (Stern, 2011).

The extent to which the state could dictate company policies and steer them away from the pursuit of profit had to be bounded or traders would not have invested. In the beginning of the 17th century, the different political conditions in the Dutch republic and England were reflected in different degrees of commitment by traders and, as a consequence, different profitability. As we will show in Section 4, the longer maturity of equity in the VOC as compared to the EIC (in the first 50 years of its existence) set the VOC on a path that yielded profits of a substantially larger magnitude for a sustained period of time.

The two companies differed also in their capital structure. While the VOC raised all its equity at the initial offering and then resorted to debt, the EIC equity was initially paid out at the return of each fleet or at intervals that spanned only few years, and debt was both more costly and less used. The Dutch capital market was definitely better developed and more efficient that England's, but the longer maturity of equity in the VOC also contributed to these differences. On the one hand, permanent capital made the VOC more solvent in the eyes of creditors; on the other hand, having locked-in equity for the long term, debt also had a beneficial disciplining effect on managers (Jensen 1986). This model implies that the achievement of permanent capital should also result in greater reliance on debt.

2.C. Constitutional change and the corporate form

Our model also has dynamic implications. If the political environment changes, we should see a change in the willingness for investors to commit their capital and hence in the equity structure of the company. In response to a lower risk of expropriation, the maturity of equity should be extended (and vice versa); in addition, as equity becomes permanent, reliance on debt should increase. This was the case in England, roughly 50 years after the chartering of the EIC. As a result of the civil war in 1642-1648, the English crown lost power to Parliament, which resulted in a sharp reduction in the risk of expropriation.

In the beginning of the 17th century, when the EIC and the VOC were chartered,

[17] See further note 20.

the constitutional setup of the Dutch Republic, where no king could overrule the main representative assembly and force the primacy of military over commercial interests, provided a critical factor to enable legal innovation (Harris 2009).[18] Since its inception in 1581, the Republic had a federal structure with cities handing over some authority to provinces, whose delegates bargained over foreign and military policy in the Estates General. Merchants had no direct voice in the assemblies, but the articulated political structure rooted in cities ensured that the Estates General were responsive to commercial interests (Gelderblom 2013). Importantly, at the crucial junctures of 1602 (when the VOC was chartered) and 1612 (when its capital became permanent), commercial interests coincided with the Republic's military interests.

This was in stark contrast with the situation in England, which, as we have noted in the Introduction, was ruled by a largely dictatorial king. Until the middle of the 17th century, the king operated as a dictator with virtually no parliamentary control, having the right to call and dismiss Parliament at will. Parliamentary activity under James I and Charles I (who succeeded him in 1625) was particularly low and, remarkably, lower than it had been under Elizabeth (Jha 2015).

The EIC recognized the inefficiency of chartering single voyages, and sought to move to a longer capital commitment cycle. Yet, progress in capital lock-in was quite slow and subject to reversals, also in response to uncertainty over changes in the monopoly status. Until mid-century, the EIC could raise capital only on short maturity, and its shareholders granted managers much less discretion than in the VOC, including more invasive investor control, participation rights and the provision of information on a regular basis (Harris 2005: 28-31; Harris 2009). These choices suggest a concern to avoid excessive exposure to public expropriation (Coornaert 1967: 227). Yet, the political situation was in flux.

After dissolving Parliament in 1629, Charles I ruled without calling a new assembly for 11 years. Things changed with the Long Parliament in 1640, leading up to the Civil War of 1642-1648, the execution of Charles I in 1649, and the establishment of parliamentary control. The war led to stronger popular support on the constraining role of Parliament (Hoppitt 2000), especially among the ranks of those with equity interests in the EIC (Jha 2015). Although with the Restoration of the Monarchy in 1660 the new king Charles II regained the power to call and dismiss Parliament, the latter retained substantial control over state finances and, in particular, over the king's power to raise taxes (Cox 2012: 572), and continued to meet yearly (Jha 2015). Upon Charles II's death his brother, who manifested autocratic ambitions, soon faced a major insurrection and fled. The Glorious Revolution of 1688 crystallized once and for all the

[18] While Harris (2009) stresses the importance of limited government for the creation of a financial market, we stress that it was crucial for the commitment of capital. In turn, capital commitments required easily tradable shares—which in turn stimulated the development of a stock market—in order to counterbalance the loss of liquidity for investors.

principle of limited government. Interestingly, the English choose as their new king Willem III of Orange, a Dutch stadhouder used to serve under a parliamentary mandate. He agreed to a Bill of Rights, which firmly established the supremacy of Parliament and strengthened property rights (North and Weingast 1989; Rajan and Zingales 2003).[19]

The evolution of political rights corresponds to a similar evolution in political thinking, which was perfectly synchronized with the political events. In the Roman tradition, the notion of *fides publica* embedded an obligation for officials invested with state power to act in the public interest. Conspicuously, the obligation was not simply moral but had legal value. The first to rediscover this notion after antiquity was the Dutch Hugo Grotius, who treated the notion in his work of youth, the *Parallelon rerumpublicarum* (Comparison of Republics), published in 1602, the year in which the VOC was chartered, shortly after the proclamation of the Dutch Republic. Grotius came back to this notion again in his more famous *De iure belli ac pacis* (On the Law of War and Peace, 1625). In England, the notion of *fides publica* began to circulate only later due to John Locke's *Second treatise of government*, published in 1689, just after the Glorious Revolution (De Wilde 2011).

As England caught up with the Dutch limited government model, it could also adapt its corporate model and build its colonial empire. While at chartering the EIC was based on short-term equity, in 1657, after the Civil War, the EIC was able to move to permanent capital. Figure 2 depicts the struggle towards permanent capital in the first 50 years of EIC existence and compares it with the contemporaneous situation in the VOC.

An interesting conclusion is that while institutional change arises from the need to capture unique opportunities, a structural change may well have self-reinforcing effects on institutional development . Acemoglu et al. (2005) show how colonial trade reinforced property rights wherever political institutions enabled an emerging class of traders to share in the benefits. Our approach shares their critical insight that political institutions constrained the set of possible solutions in terms of organizational structure of colonial trade in these countries, and defined its path of evolution. Jha (2015) presents empirical evidence that support for parliamentary rule was influenced by the development of joint stock companies, showing that shareholdings made individual members of Parliament more likely to favor Parliament in its struggle with the king.

By contrast, in circumstances when the gains from colonial trade went to the monarch or an aristocratic elite, such as in Spain or Portugal, they may have undermined the emergence of new economic subjects (Acemoglu et al. 2005). Even

[19] Clark (1996) argues that returns on charities' assets (land, tithes, houses, rent charges, and private bonds) were unaffected over 1540-1837. Yet, the assets at risk of royal predation were those with public uses, such as local infrastructure (Bogart 1980) and foreign trading rights (Jha 2015). It is in these assets that investment boomed in volume and value after the Glorious Revolution. Significantly, in the years following the Glorious Revolution, both the number and the capitalization of joint-stock companies in England jumped up (Scott 1912, I: 439); likewise, public debt increased rapidly and substantially, signifying a lower perceived risk of expropriation (Harris 2009).

more dramatically the Ottoman Empire, which ruled precisely over an important portion of the traditional routes to the far East that were replaced by the new Atlantic routes, missed the gains from the new trading routes altogether and failed to develop institutions to pool private capital (Kuran 2011).

3. Legal innovations

3.A. Legal innovations prior to the VOC

Under the traditional Roman laws of agency and partnership, a company was nothing more than a private contract (*societas*) to share losses and gains. It had no effects for third parties and no transferability of shares without unanimous consent. Essentially, any change in the partners' identity would end the old contract and require a new one to continue operations (no tradable shares). Partners were personally liable for company debts (no limited liability), personal creditors of the partners could attach company assets (no entity shielding), and the partners could rely neither on agents nor on each other to commit the company (no representation) (Abatino et al. 2011; Hansmann et al. *forthcoming*).[20]

Another important limitation imposed by Roman law principles was the lack of legal means to commit capital for the long term, as participation was essentially at-will both for partners and for co-owners (no capital lock-in; Arangio-Ruiz 1993: 231, 350; Fleckner *forthcoming*). While it was possible to contract a commitment for a term, such agreements were only enforceable through damages so that the dissolution of the partnership was inevitable if one of the partners so decided. Damages were not due if the partner forcing liquidation had a just cause, which was broadly construed as to include also disagreements among the partners. The law essentially sanctioned fraudulent behavior. Moreover, these contracts were only valid among the partners and did not bind creditors and heirs. Owning property in common did not help as co-ownerships were essentially subject to the same rules as partnerships.[21] By giving each partner a veto power on the continuation of the company, the principle of exit-at-will limited agency costs, but curbed the lifespan of the business and exposed it to inefficient early liquidation. As a result of these limitations, a company had no independent life from its investors under the Roman law.

Some of these rules were relaxed during the Middle Ages. Weak entity shielding

[20] In fact, some of these limitations could be bypassed by the use of slaves as business agents (Abatino et al. 2011) and did not apply to public contractors (*societates publicanorum*; Malmendier 2009; Fleckner 2010); however, both solutions disappeared long before the fall of the Western Roman Empire. See also Zimmerman (1996: 38-39) illustrating some methods to evade the restrictions on representation in classical Rome.

[21] The Digest of Justinian (Watson 2009) contains several texts clarifying these issues; see, for instance, D. 17.2.1.pr, D. 17.2.4.1, D. 17.2.14, D. 17.2.65.3-8, and D. 17.2.70.

developed relatively early; Hansmann et al. (2006: 1366-67, 1375-77) show that it was already a characteristic of the Italian *compagnia* in the 13th century and an established principle in the Dutch Republic by the time of the VOC.[22] Agency law (representation) followed a similar pattern. The glossators of the 12th century cast doubts on the validity of the Roman principle of *alteri stipulari nemo potest* (no representation) and exceptions had been carved out in canon law and in 16th-century natural law. By the time of the VOC, in commercial practice the Roman law principle of no representation had long been relinquished and partners were treated as jointly and severally liable to third parties for transactions carried out within the scope of the partnership. Yet, the principle was not completely abandoned until the 17th century. Legal scholars and, to a more limited extent, the Dutch Supreme Court continued to rely on it (De Ruysscher 2012; Punt 2010: 283-86). In legal scholarship, the change was pioneered by the Dutch Hugo Grotius in 1625, who supported representation in his *De iure belli ac pacis*, in response to the needs of the Dutch trading economy ahead of other European countries (Zimmerman 1996: 41-44).

While weak entity shielding and representation had been introduced by the time of the VOC, capital lock-in, tradability of shares and, finally, general limited liability came into being in the first twenty years of the VOC existence. Before the chartering of the VOC, private partnerships were short-term, unlimited-liability endeavors. This was not seen as a limitation, as few businesses in the Low Countries required large capital investments; most of the value added was due to labor. Sole proprietorship was the dominant business form in agriculture (De Vries 1974; Bieleman 1992: 31-100; Van Bavel and Gelderblom 2009). Manufacturing was dominated by urban craftsmen who worked in small workshops. Only the most capital-intensive production units, like sugar refineries and breweries, were sometimes owned by general or special-purpose partnerships (Yntema 1992; Poelwijk 2003).

General partnerships were principally used in international trade, but did not entail limited liability or capital lock-in. Following Roman law, partnerships could be formed for a term but the agreements could be enforced only through damages—which were not due if there was a just cause—and did not bind heirs (Punt 2010: 134-43). In fact, trade expeditions were normally financed for single voyages, with default liquidation at the return of the fleet (Gelderblom et al. 2011). Such partnerships entailed a measure of "natural" capital lock-in, since as the fleet sailed liquidation was materially impossible until its return. The lock-in introduced by the 1602 VOC charter implied a radically different sort of commitment, fully backed by the law.

Limited liability was similarly absent. Managing partners remained personally

[22] The recorded customs from Antwerp are evidence that weak entity shielding was recognized by the time trade moved from Antwerp to Amsterdam at the end of the 16th century due to the Spanish occupation of the city (De Ruysscher 2012). Punt (2010: 158-59, 282) shows that the Dutch Supreme Court recognized weak entity shielding generally for partnerships in the 18th century. Hansmann et al. (2006: 1376,77,1380-81) also find traces of entity shielding in a 1683 English case.

liable until the 17th century (Montanari 1990), though passive partners benefitted from limited liability already in the Islamic *qirad* and the Italian *commenda* (Favali 2004; Mignone 2005). A rare exception appears in Toulouse, where grain mills had limited liability for shareholders and directors plus tradable shares since at least the 14th century (Sicard 1953; Goetzmann et al. *forthcoming*). Yet, this model did not extend to large, risky commercial operation, but rather remained confined to specific local utilities.[23] In the Dutch Republic, the only entities enjoying limited liability for active managers were public bodies, such as water-management bodies (Van Tielhof 2009: 215-20), municipalities, religious institutions, charities, guilds, universities, and, from the 1580s onwards, admiralties (Rijpma 2012: 28-32). The corporate form extended to selected private entities with a public function, such as land reclamation projects—*copen* and *polderbesturen*—which required an indefinite life and were organized similarly to water management bodies.[24]

It is important to stress that the VOC charter was not a private contract among traders but rather a legislative act and that legal innovations contained therein did not extend to other companies. Throughout the 18th century, the Dutch Supreme Court continued to treat partnerships as inherently based on continued unanimous consent. As a result, agreements to lock in capital for a certain period, make shares tradable or limit the partners' personal liability remained difficult to enforce (Punt 2010: 279, 282, 283).[25] Since contractual solutions were not readily available, the VOC had to break with long-lasting principles by force of legislation.

3.B. The coalescence of the corporate form in the VOC

Until the end of the 16th century, Spain and Portugal dominated European trade with Africa, Asia and America. This changed when in 1581 the Dutch abjured the Spanish king Philip II and consequently declared their independence from the Habsburg Empire. In 1585, the city of Antwerp, which had been part of the revolt, fell again into the hands of the Spanish, while the Dutch rebels still controlled the river Scheldt and the Flemish coast, cutting access to Antwerp's harbor. The city, a major commercial hub, could no longer function as a gateway to northern Europe as a result of which many foreign and local merchants moved their business elsewhere. The Flemish merchants who had

[23] The mills of Toulouse derived their organization form from the feudal institution of *pariage*, which developed out of the need to guarantee the unity of inheritances while preserving an equal treatment of the heirs (Goetzmann and Pouget 2011).

[24] From the year 1000 onwards Dutch peatlands were drained using so-called *cope* contracts, long term leases that gave the occupants extensive land use rights (Van der Linden 1955) and the right to transfer them to others without approval (though land ownership remained in the hands of the feudal lord). Land reclamations in the 16th and 17th centuries were funded by private special-purpose partnerships. Once land reclamation had been completed, the initial partners could no longer be asked to subscribe additional capital. Landowners were free to sell their landholdings (Van Zwet 2009: 51-83).

[25] Even limited liability for passive partners, while enforced in merchant courts, remained highly controversial in scholarship and in public opinion (Kessler 2003).

begun trading with Russia, Africa, and the Levant in Antwerp in the 1560s and 1570s chose to settle in Middelburg and Amsterdam. They brought with them their commercial customs, which, as we have discussed above, were more advanced than the traditional principles still embraced by legal scholars and, to a more limited extent, courts. Crucially, these customs embraced the principles of representation and weak entity shielding. It was not long before merchants from Zeeland and Holland joined their efforts to establish an independent presence in markets outside Europe.

3.B.1. Single voyages, 1590-1600

The first companies sailing from the Dutch Republic to Asia in the 1590s adopted funding strategies tried and tested in European trade. The typical contract was a general partnership with additional features. The promoters drafted contracts for single voyages but with more than one ship, a longer time horizon (due to a longer duration of the return voyage), and a larger number of shareholders than traditional European ventures. The initiators invested their money under the same conditions as all the other shareholders but, in exchange for a commission fee, they planned the voyage, instructed and monitored shipmasters and trading agents, and handled the return cargoes. Piecemeal dividend payments were made as sales progressed and once the companies had sold out, accounts were drawn up and the partnership was liquidated. There was the option, but never an obligation, to reinvest in a subsequent voyage. As the first companies to Asia followed the rules of traditional partnerships, all investors were jointly and severally liable for any debts incurred by the initiators, but their liability was effectively limited in two ways. On the one hand, the investors could deny any claim that followed from actions that lay outside the designated purpose and duration of the partnership. On the other hand, in shipping ventures, they could invoke maritime law and abandon their investment in case of total loss of the ship due to shipwreck or capture (Gelderblom and Jonker 2004; Gelderblom et al. 2011).

In 1597 the first three ships returned from Asia. Although the return cargo hardly covered the costs of the expedition, this failed to dent the belief that large profits could be made, resulting in a wave of new voyages organized by companies from Amsterdam, Middelburg, Veere, Rotterdam, and Delft. State coordination remained limited to arrangements with the local and provincial governments about sailing in convoys and the supply of ordnance and ammunition. Setting up a long-term trading company would have yielded higher gains than single voyage contracts because the long-term investment would have made it easier to secure the Cape route. However, long-term commitments entailed moral hazard costs, due to the directors' superior information on trading operations, while there always remained the possibility that other Dutch traders would recruit investors to set up a rival company to reap the benefits of this emerging trade.

3.B.2. Local coordination, 1600-1602

Competition between companies in different cities led to the dispatch of no less than 62 ships between 1597 and 1601—a much larger number than in England, where only one group of London merchants received a royal charter to trade with Asia (De Vries 2003; Gelderblom 2009). As the vast majority of ships returned with rich cargoes, profits were very high. Between 1598 and 1608 the investors in Amsterdam's early companies earned an average annual return of 27 percent (Gelderblom 2003). But the company directors and government officials realized that competition could undermine profits, while the growing Dutch presence in South-East Asia also rendered Spain increasingly wary, thus raising the likelihood of attacks on shipping to and from the East. These worries inspired the municipal governments of Amsterdam and Middelburg to apply a device that had been used successfully in Amsterdam's Africa trade in 1598: the merger of local companies. In 1600 the *Oude Compagnie* and the *Nieuwe Compagnie* in Amsterdam coordinated their sailing and in 1601 they formed a new company, which sent out a fleet of eight ships. Yet, a similar attempt in Middelburg failed, on the refusal of prominent merchant Balthasar de Moucheron to join.

This lack of coordination in Zeeland reveals the inherent instability of coordination at the local level. It may have raised profits in the short term but the arrangement was prone to opportunistic deviations, the more so as there was a considerable number of competing ports, which made it easy enough for traders to invest in another company or even create a new one. As local coordination did not guarantee large profits in the future, merchants had no incentive to commit capital for a longer period. Thus, Amsterdam's united company continued to be organized as a special purpose partnership, with a small committee of managing directors drawn from the two previous companies in charge of equipment and sales. As for protection, the directors continued to borrow military hardware from the city and they worked with the local admiralty board to impose a naval command structure on the fleets sailing to Asia.

3.B.3. The first VOC charter, 1602-1612

Since local coordination could not secure the Asian routes, provincial and central authorities pushed for national coordination. After intense negotiations, agreement was reached to establish a public monopoly on the Asian trade for 21 years. Operations would be managed by six local chambers, which appointed a central governing board of 17 delegates (the *Heeren XVII*) to run the overall business. Amsterdam, the biggest chamber, obtained only eight seats on the board so that it could not dictate proceedings. The other five chambers—Middelburg, Enkhuizen, Delft, Hoorn and Rotterdam, in decreasing order of their capital contribution—did not obtain a right to appoint directors, but received a promise that they might appoint supervisors to monitor the interests of their shareholders.

The 1602 charter offered an adequate time horizon to secure the Cape route. Shareholders committed capital for 10 years. They were to receive a dividend once accumulated profits (gross of re-investment) matched the initial investment. In 1612 they were to receive full accounts, and the option to either withdraw their share or to reinvest it into a new 10-year venture. What was not envisioned at the time was the opportunity cost of liquidating assets in 1612.

The government delegated sovereign powers in Asia to the VOC, notably the rights to conclude treaties with foreign powers, to wage war, levy taxes, and operate a formal legal system for judging its employees. In exchange, the Estates General obtained safeguards in the charter that the company would do its bidding. This hybrid structure of a private commercial company with public responsibilities justified a special corporate status typical of other public bodies in the Dutch Republic (Gelderblom et al. 2011). Yet, the charter of 1602 did not establish the full legal personality of a modern corporation. The company remained a special purpose partnership, with no permanent capital, and the directors remained unlimitedly liable for any debts incurred on behalf of the company, with the exception of wage arrears—all passive investors were instead limitedly liable. Company directors were probably willing to take the risk as they planned to fund trade from share installments until 1607, and from revenues thereafter. The capital raised enabled the company to engage in large-scale military investment to secure its overseas position, while the monopoly over commerce with Asia prevented traders from free-riding on the security provided in Asia by the VOC.

As investors might find it difficult to commit funds for such a long duration, it was decided to allow free transferability of shares. Intense trading started immediately after the closing of subscriptions (Gelderblom and Jonker 2004; Petram 2011). This was a major change relative to practice, where consensus on partner identity was fundamental.

The unprecedented managerial discretion granted to the board was a common cause of concern. From the start shareholders worried about the VOC policy, in particular the priority of war over trade and the lack of dividends. Three merchants and directors of the Amsterdam company, which had merged into the VOC, refused to join when the extent of the new company's hostile intentions became clear (Van Dillen 1958: 71, 98-99). In 1603 Balthasar de Moucheron, who had long resisted before he gave up his own successful trade with Asia, resigned as director over a policy disagreement. Two years later, another prominent investor and director, Isaac le Maire, resigned and sought to pursue trade independently. As a result, their former colleagues petitioned the Estates General in 1606 for a ban on directors resigning, which was eventually turned down (Gelderblom et al. 2011: 47).

Throughout the first charter and beyond, pressure remained to allow additional private trade (Van Dam 1927: 220-27). In 1609, le Maire complained to the Republic's powerful statesman Johan van Oldenbarnevelt about the unfairness of keeping private

business out of trading areas covered by the company's monopoly but never visited by it.[26] He sought to found a rival company in France (Bakhuizen van den Brink 1855), and later organized an expedition to circumnavigate South America, a route not covered by the VOC's monopoly. The ships reached the Indonesian archipelago, only to be impounded by the VOC. Though le Maire ultimately won a prolonged litigation, this experience discouraged further attempts to test the VOC monopoly.[27]

The VOC set out rapidly to gain a strong position, seizing many of the best spice trade ports, especially from the Portuguese. The Dutch easily outspent the English EIC, which funded smaller expeditions backed by short-term capital. By sheer volume of ships, manpower and willingness to invest in local infrastructure, the VOC soon secured a stronger position in South-East Asia. However, the amount of military investment exceeded expectations, also because of the Estates General's push for an aggressive stand against the Spanish to relieve pressure on the Republic in Europe. The first fleet sent out in 1603 received instructions to escalate from the incidental skirmishes encountered by the early companies to a systematic campaign. This caused considerable damage to the Spanish and Portuguese trade, and the sinking of ships, cargo seizures and conquest of enemy fortresses ultimately served the VOC's commercial interests. The Estates General had to concede by 1612 that the scale of violence had been much larger than the safeguarding of current expeditions would have required. Ships had to serve more than one purpose, sailing around the Indonesian archipelago for years before returning laden to the Dutch Republic, resulting in high wages per ton of return cargoes.

Within five years of its formation, VOC directors found themselves confronted with pressing financial shortages (Gelderblom et al. 2012). The four fleets sent out between 1603 and 1607 had exhausted the available cash. Wage bills were met by drawing on the revenues set aside from the Van Warwijck expedition—the last one formally organized by an early company but partly merged into the VOC—but this left little for equipping new fleets, causing the number sent out to drop to only four during 1608 and 1609. The company came under fire at home from its shareholders. The price of VOC shares dropped to a low of 80% of nominal value. Annoyed about the company's failure to pay dividends from a lucrative trade, merchants lobbied against any charter extension and for allowing free access to areas not yet developed, which were now made safe by the VOC's past investment. Le Maire launched a massive bear raid on VOC shares in an unsuccessful attempt to force the board to change strategy (Van Dillen 1930). The truce with Spain (1609) changed very little, as it was agreed that breaches overseas would not amount to a violation.

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[26] Shareholder rights 400.

[27] In fact, a last attempt was made at the time of the company's charter renewal in 1622-3. Jan Pietersz Coen called for allowing participation of private business in VOC controlled ports, to build up the intra-Asian trade. He ran into strong opposition from a coalition of company officials in Asia and the Estates General, and failed to convince the board.

3.B.4. The transition to permanent capital

As early as 1606 the VOC directors realized the difficulties of liquidating in 1612 and appear to have started lobbying to have that obligation lifted (Funnell and Robertson 2012: 351). In May 1609, Cornelis Matelieff de Jonge, the commander of the third VOC fleet, presented Johan van Oldenbarnevelt with a written opinion on the state of affairs, which the statesman had asked him to prepare.[28] In his report, Matelieff's principal concern was that the VOC directors were unwilling to make necessary investments in military operations as these would weigh on the profits of the first 10 years' account to be liquidated in 1612, while any return on military investment would benefit investors in the second 10-year account. Yet, he argued, if no investments were made now, it would be very hard to find new investors in 1612 because of lost ground in Asia. Matelieff added that the decision should not be left to the company directors, because they would not mind if the East India trade ended when the charter expired in 1622, but the country would.[29] In practical terms, Matelieff suggested that the directors should no longer operate as if the 10-year account would be terminated, but rather focus on keeping their foothold in Asia.[30]

Our interpretation matches Matelieff's view. The statutory expiration of the VOC equity handicapped a long-term strategy, in a race in which commercial and military investment had to be frontloaded. Shortly after Matelieff's report the Estates General awarded a rebate of 100,000 guilders on customs duties, agreeing that they had pushed the company into war.[31] In 1610 directors asked for a substantially higher subsidy. Calling itself "a servant of your policies", the board argued that the Asian trade was not a private enterprise but rather an affair of state. As ships and crew were often devoted to war rather than trade, the company could not pay cash dividends to shareholders and may resort to raising large amounts of debt.[32] The board also lobbied for the lifting of the charter's requirement to liquidate in 1612.[33]

The high point came as the directors' formally requested the charter change to the Estates General in March 1612,[34] which, technically, was a clear violation of private shareholder rights. The board presented two sets of arguments. The business arguments focused on the nature of the VOC's assets. Transferring the complex lot of forts, warships, offices, and debts due in soldiers' pay and merchants' salaries would have been extremely difficult. Moreover, presenting the accounts would have shown the VOC's weak cash position and the new company would have found it difficult to attract investors. The business really needed a permanent basis to keep investing, and more

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[28] Oldenbarnevelt, *Bescheiden*, p. 319-327

[29] Oldenbarnevelt, *Bescheiden*, p. 320.

[30] Oldenbarnevelt, *Bescheiden*, p. 324-325.

[31] NA 1.04.02 VOC No. 368, resolutions 22 August, 29 September 1609.

[32] NA 1.04.02 VOC No. 368, resolution 17 November 1610.

[33] Resoluties Staten Generaal 1610-1612, 359.

[34] NA 1.01.03 No. 4841, fol 162-167.

time would permit to reap the benefits. Suspending liquidation would not harm shareholders, as they could sell their shares. Turning to political arguments, the board emphasized the importance of a permanent company as a trustworthy ally for foreign princes. If wound up now and every ten years nobody would enter into agreements with the company, it could not function as the Estates General's representative overseas. The board professed its willingness to draft accounts for the first 10-year period and subsequently every year in a manner to be set by the Estates General, so as to eliminate any suggestion of opportunism.

At the end of July 1612 the VOC board sent another urgent request. Competition with the EIC was heating up. Not weighed down by high war costs, the English could undercut the VOC in European sales. Spain and Portugal continued hostilities in Asia despite the 1609 truce. Shareholders threatened litigation to force compliance with the charter. Unless the Estates General provided the subsidy required, started negotiations with the English, and lifted the charter obligations, trade would come to a standstill, pushing up unemployment.

The Estates General considered the matter on Saturday, July 28, 1612. On Monday news came from Spain about an imminent offensive on VOC fortresses. The following day, Tuesday, July 31, 1612, the Estates acted. They suspended the charter article concerned, declaring that, "for the benefit, wealth, honor, and reputation of the country, and for other compelling considerations and reasons of state (…) the East India Company should be maintained and conserved in its present state and strength". Decisions on specific points of the company's request were to take another couple of months, but the VOC's capital had become de facto permanent.[35] For the first time in history, a private firm had gained the prospect of indefinite life.

Why did the government have to intervene? A private solution to ensure continuation would have likely foundered, not least because any individual investor could block continuation. In theory, shareholders could have bought out all those demanding the liquidation of the first account. Yet the price would have been huge, as some traders were eager to undermine the VOC monopoly, and in fact any individual shareholder would have held a right to veto the continuation. Had the government not forced a solution, the only legal option was to follow the charter, liquidating the first 10 years' account to launch a new subscription campaign. But this required the valuation of existing assets, many located in Asia and hard to assess before the return of all ships and the sale of distant property.[36]

3.B.5. General limited liability

Rendering the capital permanent in 1612 solved one financial concern of the directors

[35] NA 1.01.03 *** No. 4841 fol 181, 28 July 1610.

[36] As we discuss later, the EIC also struggled in transferring assets across its much shorter subscriptions and shorter asset cycle.

but immediately created a new one. Whereas the VOC still needed ready cash to fund its annual fleets, permanence effectively eliminated the option of raising equity, as more equity would have worsened the investors' exposure to the risk of directors' opportunism. Next to reinvested profits, debt offered a better financing alternative to equity as it could function as a disciplining devise on directors and contain agency costs. As the VOC gradually stepped up its debt exposure, the directors' unlimited personal liability became a reason of concern.

With sales revenues lagging behind equipment costs, the company successively tried insurance, the postponement of dividends payments, and short-term deposits to make ends meet. None of these provided a definite solution, and for several years the VOC finances continued to be based on revolving capital: profits from returning ships were used to finance new expeditions, while instalments on the initial capital subscriptions were to guarantee a limited amount of debt. Financing also remained decentralized, with the different chambers borrowing separately and equipping their own fleets (Gelderblom et al. 2012).

As new competitors began to arrive on the Asian scene, including a French Company and the *Austraelsche Compagnie* established by le Maire, the VOC directors raised their game.[37] In 1615 they took the decision to send more ships in order to deal the competition a decisive blow and establish an operational hub in Batavia. As sales revenues remained too low to fund the equipment of additional ships, the campaign was funded by issuing 8 million guilders worth of debt between 1617 and 1623 (Gelderblom et al. 2012).

The directors' financial exposure sharply increased as a result of these loans because, just like the promissory notes traded on the Amsterdam money market since the late 16th century, they were secured on the person and goods of the directors issuing them (Gelderblom and Jonker 2004). Thus, in order to limit each director's individual exposure to creditors' claims, the VOC in 1617 centralized financial policy, so that the individual chambers would have had to ask permission to raise debt. At the same time, they transformed a directors' individual exposure to liability into the pro rata liability of all directors by agreeing that they and their successors would underwrite any future debt. This allowed the company to borrow more easily from the Amsterdam money market, which had more favorable rates (Gelderblom et al. 2012).

As unlimited liability provisions remained unaltered in the second VOC charter of 1623, directors had their officials sign obligations. The ensuing uncertainty as to who was liable was ended by a unilateral resolution later in 1623 by the directors to rewrite the text of their bonds and explicitly exclude any personal liability (Gelderblom et al. 2012). Critically, Dutch courts ultimately upheld the general nature of the exemption, a

[37] On the first two ships sailing from France in 1615 and an earlier failed attempt to do so in 1604, see Du Fresne de Francheville (1738) (courtesy David le Bris).

step that could not have been achieved without political support. From then on, the VOC as a legal entity was exclusively liable for its debts (Punt 2010: 290-91).[38] As we have observed, this corroborates the view that, differently from capital lock-in, limited liability could be (and was) introduced by a contractual innovation—even if later supported by the courts—rather than a legal innovation, and consequently that the law played a more important role in restricting claims on company assets than in protecting the investors' personal assets. The introduction of limited liability completed a two-decade-long process of slow coalescence of the missing building blocks of the corporate form.

4. Historical evidence of the causes and effects of lock-in

The VOC's organizational model was enormously effective. Figure 1 shows how, during the 17th century, the VOC outperformed all its European competitors sending more ships to Asia than all of them taken together; similarly for tonnage (Figure A1) and personnel (Figure A2). This trend continued into the 18th century until when, in 1800 the VOC officially ceased to exist. An impressive 59% of all the Europeans that travelled to Asia in the two centuries of VOC existence sailed with the VOC; in some decades this figure was over 70% (Figure A3). These data also reveal an increasingly prominent role for the EIC, especially from the second half of the 17th century and into the 18th century. In this section, we will examine the available quantitative evidence in order to gain more insights into the reasons and effects of the different organizational models adopted by the VOC and the EIC.

We face serious limitations. As Chaudhuri (1965: 208) indicates nothing survives of the detailed accounts kept by the EIC from its creation in 1600. The ledgers with capital subscriptions and dividend payments are no longer available, nor do we have at our disposal the accounts of the treasurers, who kept cash receipts, loan issues, interest payments and loan redemptions. Furthermore, we know next to nothing about expenditures on ships and personnel sent to Asia, or the financial flows within Asia in the first half of the 17th century. All that remains are three partial tabulations of capital investments, dividend payments, and incidental loans and stock prices for various years in this period. Chaudhuri (1965), and Scott (1912) before him, have turned these documents into tractable overviews of revenues and spending, albeit without the level of detail available for the VOC in this period. Nevertheless, the available data tell a compelling story about the more solid capital foundations of the VOC, its ability to invest for the long term and, consequently, its larger gains.

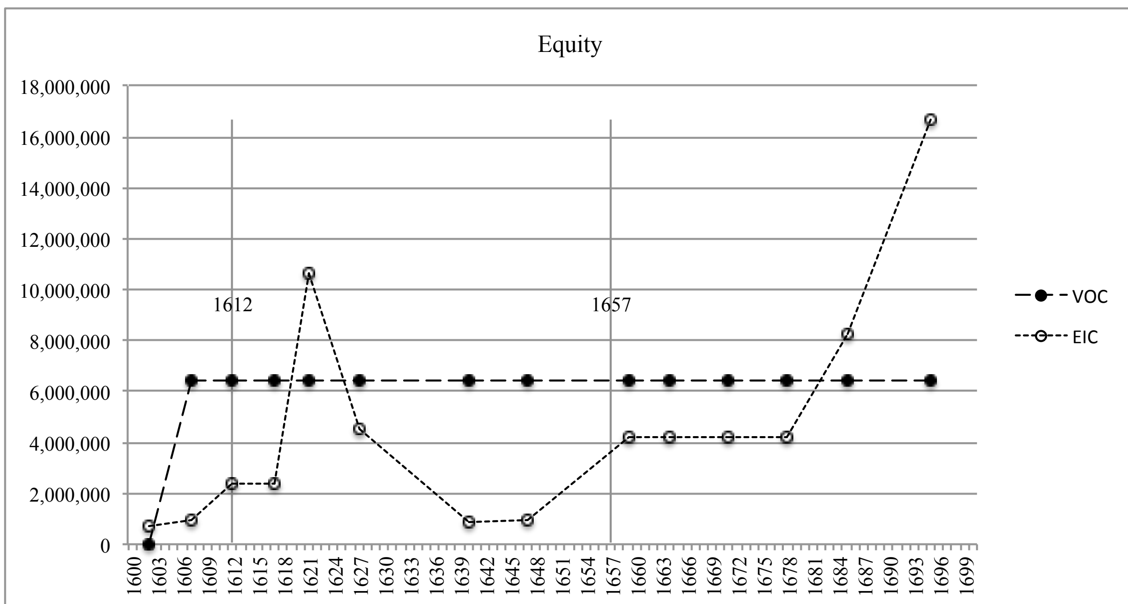
[38] Punt (2010: 290) points out that, at the time, the VOC was not viewed as a legal person and directors were part of lawsuits against the company. Yet, by the 18th century, judgments would not be enforced against the directors personally but against the company.

4.A. Capital structure

The EIC was chartered on December 31, 1600 by Queen Elizabeth, who granted a group of 216 merchants a 15-year monopoly on trade with Asia. The monopoly covered all countries east of the Cape of Good Hope and west of the Straits of Magellan. Yet, while the VOC could rely from the start on a relevant amount of capital (over 6.4 million guilders) committed for the medium-term (10 years), the EIC followed conventional organizational practices and raised capital for one voyage at a time. For its initial voyage, the EIC raised slightly more than the equivalent of 700,000 guilders, about 1/10 of the capital raised by the VOC.

Figure 2 compares the capital commitment of the two companies over time. The EIC lagged consistently a step behind the VOC. While the VOC started immediately with a medium-term commitment, the EIC financed its first 12 voyages as 12 different enterprises with separate capital subscriptions. Profits were large, at times over 230%, but it was only in 1613 that the EIC started experimenting with a medium-term commitment of capital in its *First Joint-Stock* lasting 8 years. By that time, the VOC had already moved to permanent capital. The EIC continued to struggle with medium-term commitments in a series of successive and partially overlapping joint-stock subscriptions until the middle of the century—the *Second Joint-Stock* in 1632 and the *Third Joint-Stock* in 1642—with a brief reversal to short-term financing between 1628 and 1631 in the three *Persian Voyages* (Chaudhuri 1965: 209).

Figure 6. Equity (paid in) 1600-1700 (guilders). Source: Gelderblom et al. (2015: Appendix); Glamann (___); National Archives (1617); de Korte (1984).



While the VOC could rely on a stable capital base and massive retained earnings, the EIC had a fluctuating capital (Figure 6), which was subject to uncertain reinvestments at each deadline and more substantial redistributions of dividends to

appease investors. These patterns started to change in 1657, when the EIC was granted permanent capital.

Figure 7. Cumulative dividends 1596-1676 (guilders). Source: Chaudhuri (1965: 207-23) and Scott (1912, 91-113); Gelderblom (2009); Gelderblom et al. (2012).

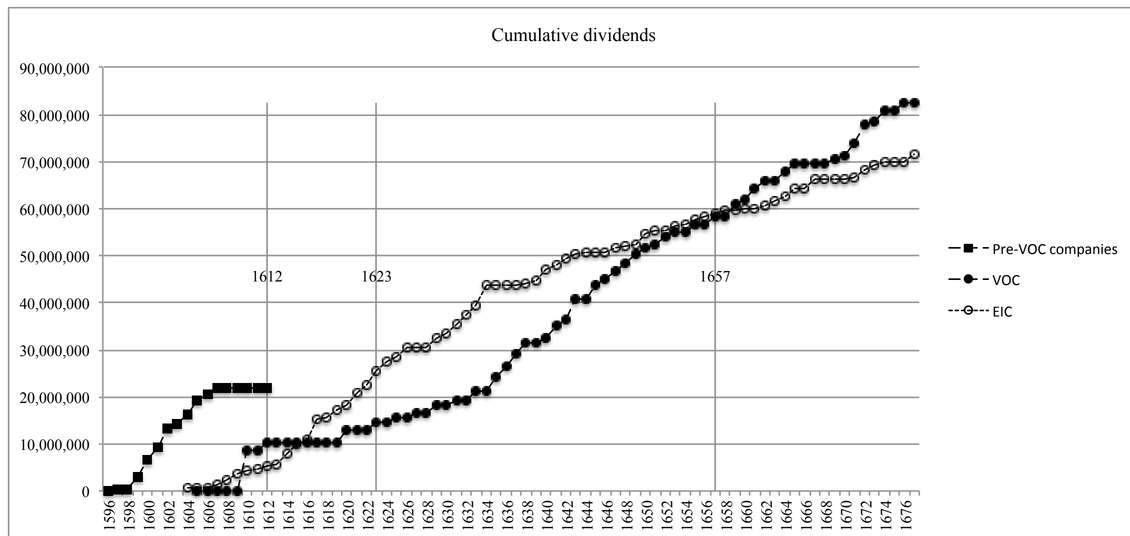


Figure 7 compares the dividends paid to investors in England and the Dutch Republic. Up to 1608, pre-VOC Dutch companies had paid an estimated 21 million guilders in dividends. This was roughly the amount of profits the EIC returned to its investors in the first twenty years of existence. In contrast, the VOC paid out considerably less in its first thirty years. The figure significantly underestimates the magnitude of the VOC retained earnings. Since the scale of operations and profits were much larger in the Dutch Republic than in England, if the two companies were distributing dividends in the same proportions, one would see a much larger absolute figure for the VOC. The fact that, in absolute terms, the VOC consistently distributed less that the EIC is a powerful indication of the different financing models followed by the two companies.

The EIC aimed at paying out its cash flow rapidly to investors. This reflected the shorter maturity of its equity (including promised dividends), the greater influence granted to its investors and the limited managerial discretion in its charter. Interestingly, the EIC and the VOC data cross exactly around 1657, when the EIC gained permanent capital, evidencing a sharp change in reinvestment policy in England.

The two companies also had different access to debt. The VOC could borrow at a lower (and decreasing) interest rate and did increasingly so, accelerating after 1612, when its equity was made permanent, and again after 1623, after the establishment of the directors' limited liability (Figure 8). In contrast, the EIC raised a smaller amount of funds through debt and, although the data in Figure 9 is very limited, faced a higher interest rate. The difficulties that the EIC encountered in financing its operations are also evidenced by the fact that in 1628 it had to borrow abroad, including in Amsterdam

(Chaudhury, 1965: 219-20). After 1657, the EIC started borrowing larger amounts thanks to its now stable equity structure, mimicking what had long been the VOC strategy.

Figure 8. Debt 1600-1700 (guilders). Source: Gelderblom et al. (2015: Appendix); Glamann (___); National Archives (1617); de Korte (1984).

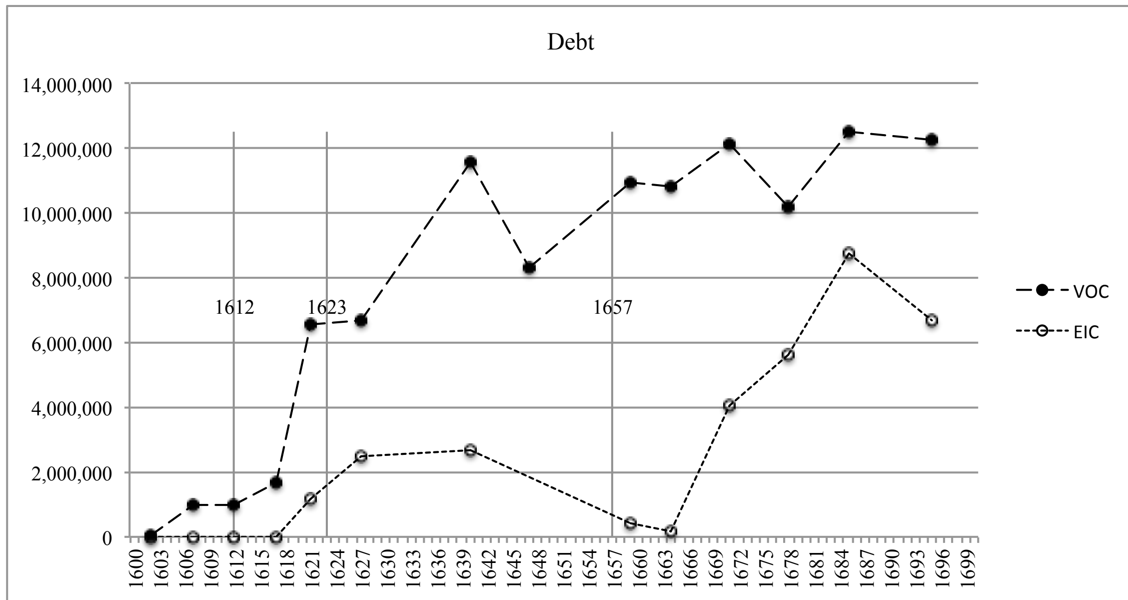
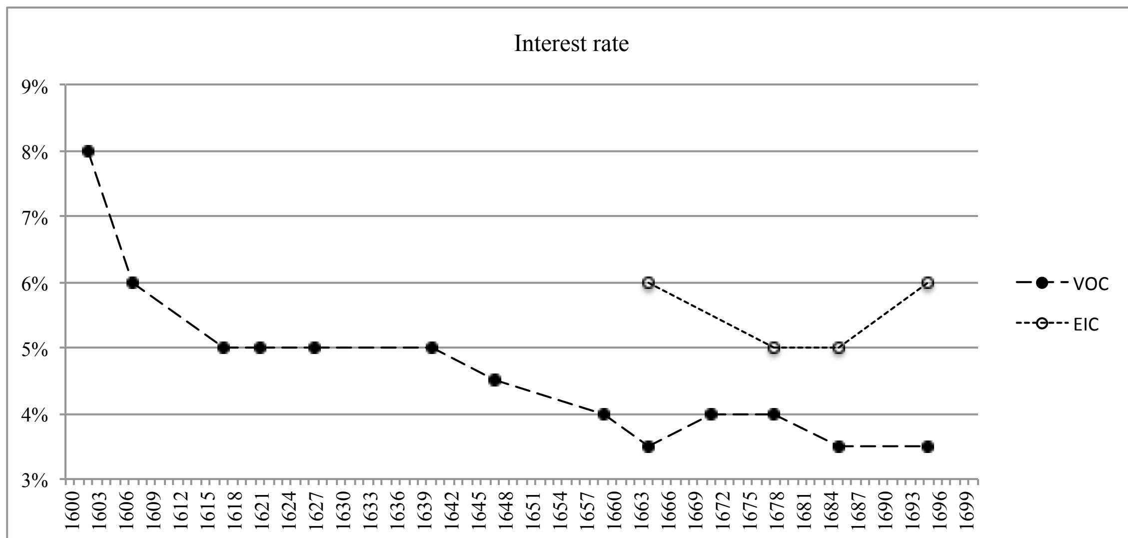


Figure 9. Interest rates 1600-1700. Source: Gelderblom et al. (2015: Appendix); Glamann (___); National Archives (1617); de Korte (1984).

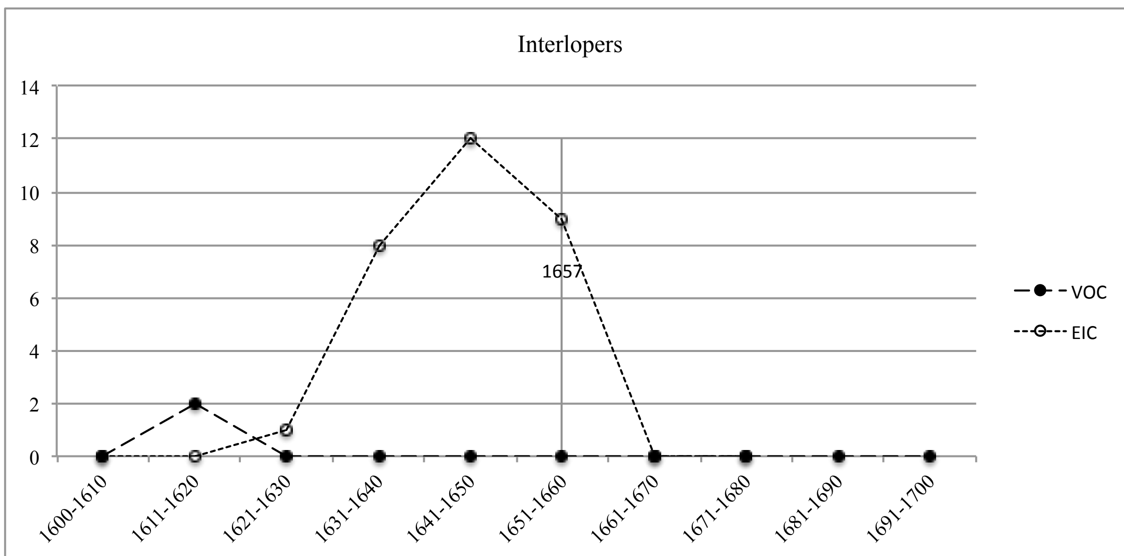


4.B. Expropriation risk

After the first voyage, English merchants raised the equivalent of 300,000 guilders to equip a second small fleet in 1601 (Scott 1912: 92-94). By then, already 50 ships had

left the ports of the Dutch Republic (Bruijn et al. 1979-1987), even prior to the founding of the VOC. London merchants' willingness to invest was held back by distrust in the English monarch's attitude. Queen Elizabeth's successor, King James I, granted charters to competing expeditions (in 1601 and 1607, with an extension in 1609), in blatant disregard of the EIC charter (Scott 1912: 97-100). A very similar attitude manifested itself as concerns the enforcement of the EIC monopoly vis-à-vis private traders. Figure 10 depicts the number of interlopers for the EIC and the VOC.

Figure 10. Interlopers 1600-1700 (number of incidents). Source: Chaudhuri (1965; 1993); Steensgaard (1982); Van Dam (1927).



In the first half of the 17th century the EIC faced a much more serious problem with both political and private monopoly infringements than the VOC, which instead fought with greater determination against the few instances in which private traders tried to infringe on its monopoly and never had to compete with a rival Dutch company. As reported in Section 3.B.3, although the VOC lost in court against its only challenger, this experience discouraged further attempts to test the VOC monopoly. Together with the chartering of competing companies, private monopoly infringements are evidence of the expropriation risk faced by the EIC investors until the Civil War.

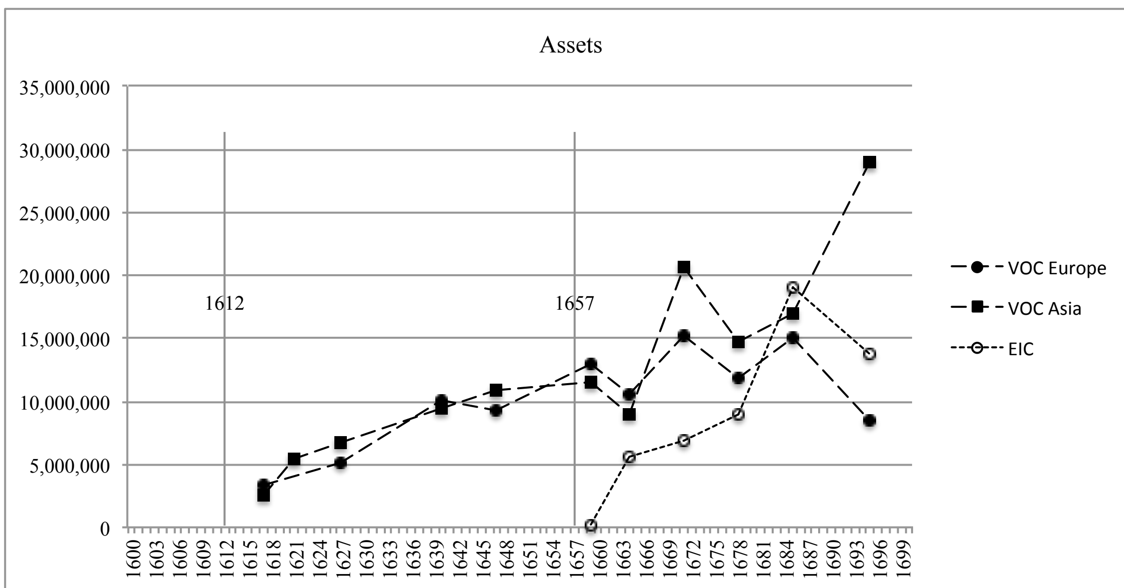
4.C. Long-term capital and long-term investment

The different maturity of equity in the VOC and the EIC produced markedly different investment strategies. Notably, not only did the VOC invest more than the EIC, but it also invested differently, allocating resources away from short-term pursuits into long-term infrastructural investments. The nature of the Asian trade, unlike other merchant activities, required investment in circulating and fixed capital well in excess of short-term revenues.

In contrast to the EIC, based on rapid capital return by promised dividends and

high interest rates, the VOC engaged immediately in systematic military spending, initially focusing on attacking Portuguese strongholds. Later, Jan Pietersz Coen developed a two-pronged strategy of establishing control over access to the Spice Islands in the Moluccas, and building up a naval force to patrol the sea-lanes in the archipelago. Once Coen had established a central, fortified hub at Batavia in 1619, he directed the VOC's military efforts further towards protecting the key routes to the Moluccas, China, and Japan. None of the company's rivals came to muster comparable forces; by the early 1630s the Dutch were master over the Indonesian archipelago. It would only be at the end of the 1650s, when the English company had finally obtained permanence, that a new round of the colonial tournament began, this time with India as the primary arena. The Dutch sought to thwart English expansion even in India, where they added several strongholds. Only much later would the English gain the upper hand in this area.

Figure 11. Assets 1600-1700 (guilders). Source: Gelderblom et al. (2015: Appendix); Glamann (___); National Archives (1617); de Korte (1984).

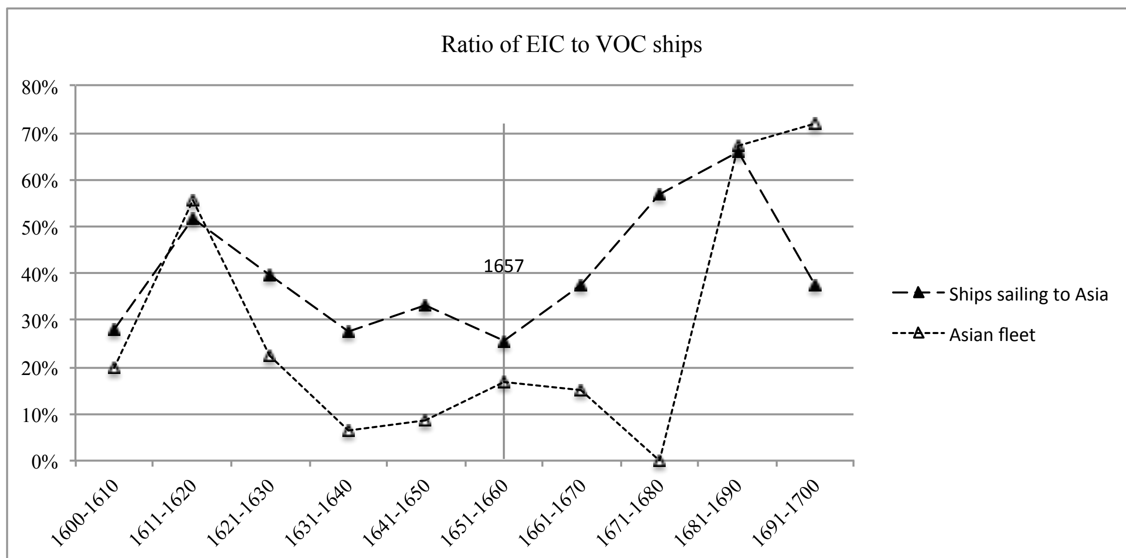


The VOC had a long-term approach to the infrastructure to be built in Asia, a strategy that was regarded as a model to follow by EIC officials (Stern 2011: 19-21). We have noted above that the short maturity of equity in the EIC created instead a common-pool problem that stood in the way of long-term investment. Each individual voyage (and later each separate joint-stock) was a different commercial enterprise with a potentially different body of investors. Investments made by one of them would have benefitted also the others. Figure 11 shows that the VOC invested massively in Asian assets. Although detailed data is lacking for the EIC, we can be sure that investments by the EIC were substantially lower.

Both companies stationed a number of ships in Asia with the task of providing security for the trading fleets and operating a network of inter-Asian trade. The VOC

operated a much larger Asian fleet with an impressive record of over 100 ships around the 1660s (Figure 3). Not only was the EIC unable to match the magnitude of these investments, it was also specifically incapable to provide the sufficient long-term horizon necessary to keep a stronghold in Asia. Figure 12 shows how the VOC advantage was more pronounced in the Asian fleet than in the trading fleet. We have already noted in the Introduction that the inability to station enough ships in Asia resulted in slower return voyages for the EIC (Figure 4).

Figure 12. Ratio of EIC to VOC ships 1600-1700. Source: Bruijn et al. (1979-1987); Chaudhuri (1965; 1993); Steensgaard (1982); Van Dam (1927).



4.D. Effects of a more efficient organizational model

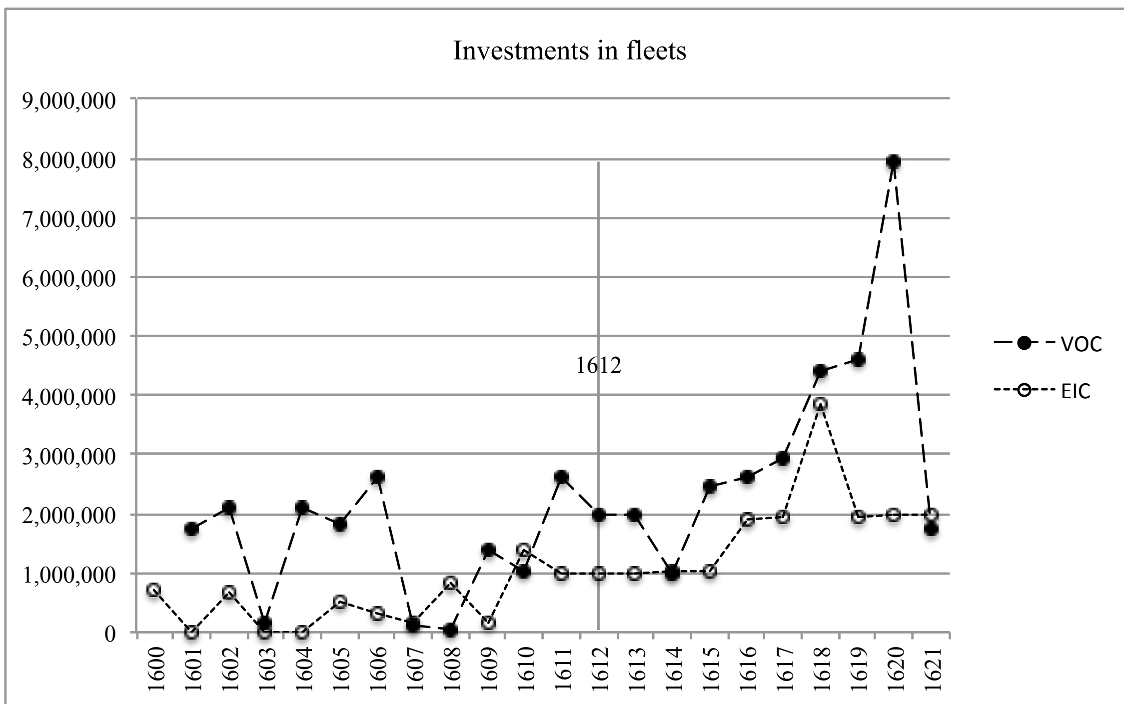
The relative strength of the EIC and VOC in the first part of the 17th century can be appreciated by comparing English and Dutch employment and investment in ships sailing to Asia. Figure 13 and Figure 14 show that the Dutch rapidly pulled ahead of the English. The Dutch invested 14 million guilders between 1600 and 1607, against 2.2 million guilders for the EIC. After some difficult years the Dutch invested 12.4 million guilders in seven fleets sailing between 1610 and 1616.[39]

Direct evidence of the commercial competition in this period comes from correspondence of VOC directors with its Asian governors. Coen reported closely on English fleet movements and skirmishes with VOC vessels (Colenbrander 1934: 45, 65, 69-70, 93-94, 117, 132, 139-43, 152-53). Coen's greatest concern was that whereas the VOC used a considerable part of its ships, crews, and silver for military operations, the English used the bulk of their resources to buy as many spices as possible to dispatch to

[39] In 1608 prospective shareholders were unwilling to advance their money for the equipment of a new fleet, hence the EIC had to borrow to start preparations (Scott 1912: 100).

Europe (Colenbrander 1934: 79). Coen observed that the English were free-riding on Dutch military efforts to secure the area and inspired a major policy change, visible in Figure 13. From 1616, the VOC sent out larger fleets with more silver to buy up spices ahead of the English (Colenbrander 1934: 69, 93, 149; Gelderblom et al. 2012). The speed and scale of this strategic shift clearly depended on the sustained capital commitment.

Figure 13. Dutch and English investments in ships sailing to Asia, 1600-1621 (guilders). Source: Bruijn et al. (1979-1987); Chaudhuri (1965; 1993); Steensgaard (1982); Van Dam (1927).



In contrast, the initial EIC subscriptions were very profitable—each of the six fleets sailing between 1610 and 1612 turned a profit between 50 and 200 percent—but too short (Chaudhury, 1965). In the attempt to increase the scale of operations, in 1613 the *First Joint-Stock* raised a capital of 4.2 million guilders for four subsequent voyages and, following its good results, the *Second Joint-Stock* planned investments of 2 million guilders per year between 1617 and 1625. But that was not enough; the VOC had already moved to permanent capital and was able to invest on average 3.5 million guilders a year after 1617, outspending and outgunning the EIC. The conquest of Bantam, the creation of Batavia in 1619 and the seizure of key ports enabled to build a local trading network, and intra-Asian sales over time helped finance European purchases.

The effectiveness and the VOC organizational model is evidence by data on the ships (Figure 15), tonnage (Figure 16) and personnel (Figure 17) travelling to and from Asia, and the level of sales (Figure 18). In all these measures the VOC performed better

than the EIC, while the EIC started improving after 1657. However, the gap was so big that it took several decades before the EIC could regain a competitive position.

Figure 14. Cumulative difference of Dutch and English investments in ships sailing to Asia, 1600-1700 (guilders). Source: Bruijn et al. (1979-1987); Chaudhuri (1965; 1993); Steensgaard (1982); Van Dam (1927).

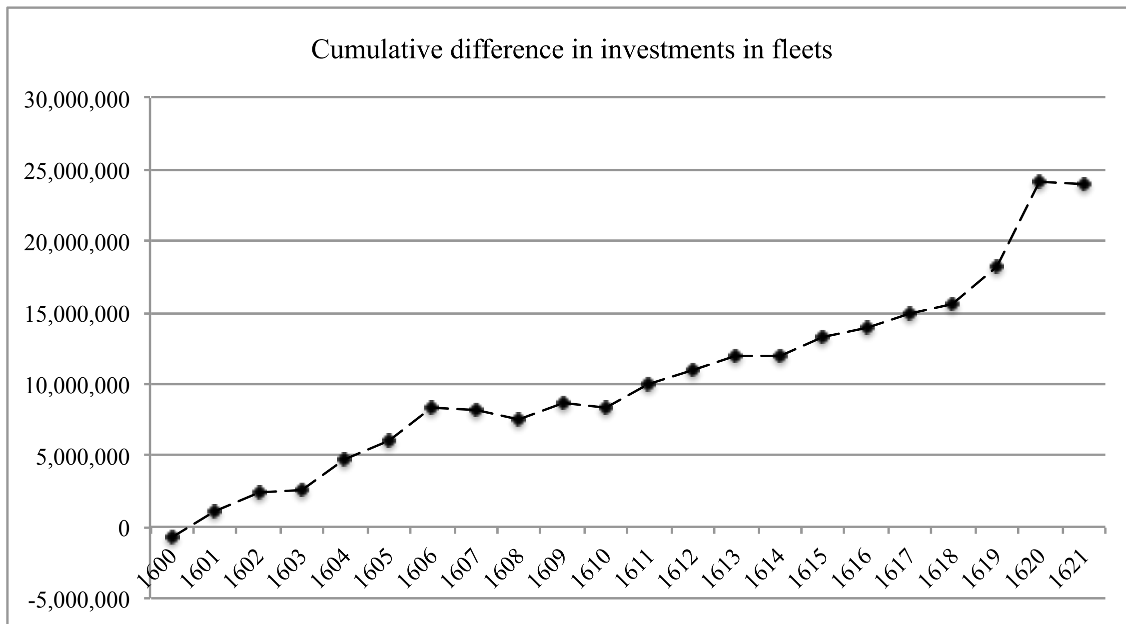


Figure 15. Ships, 1600-1700 (number of ships). Source: Bruijn et al. (1979-1987); Chaudhuri (1965; 1993); Steensgaard (1982); Van Dam (1927).

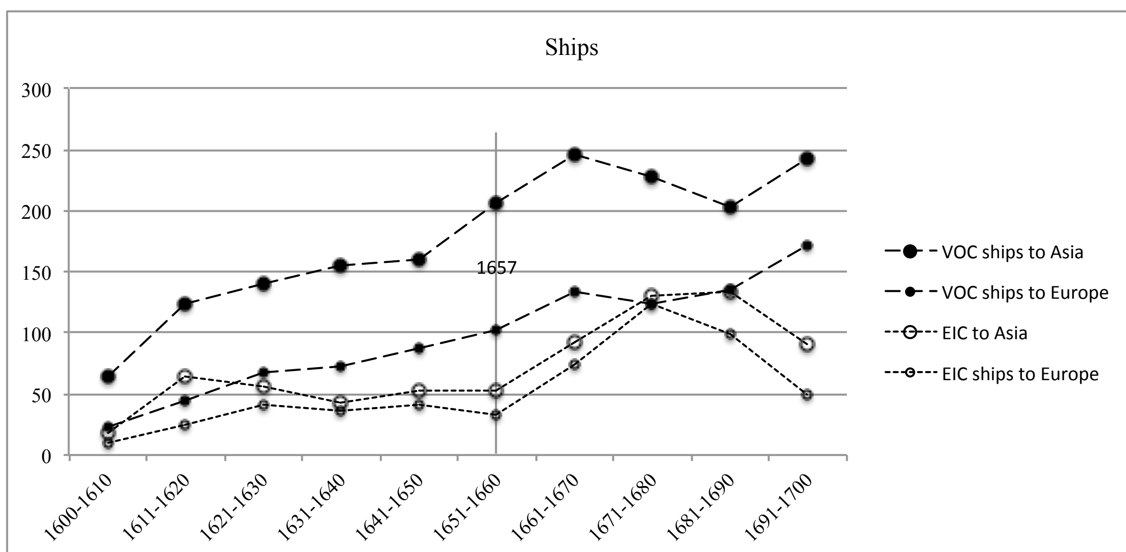


Figure 16. Tonnage, 1600-1700 (tons). Source: Bruijn et al. (1979-1987); Chaudhuri (1965; 1993); Steensgaard (1982); Van Dam (1927).

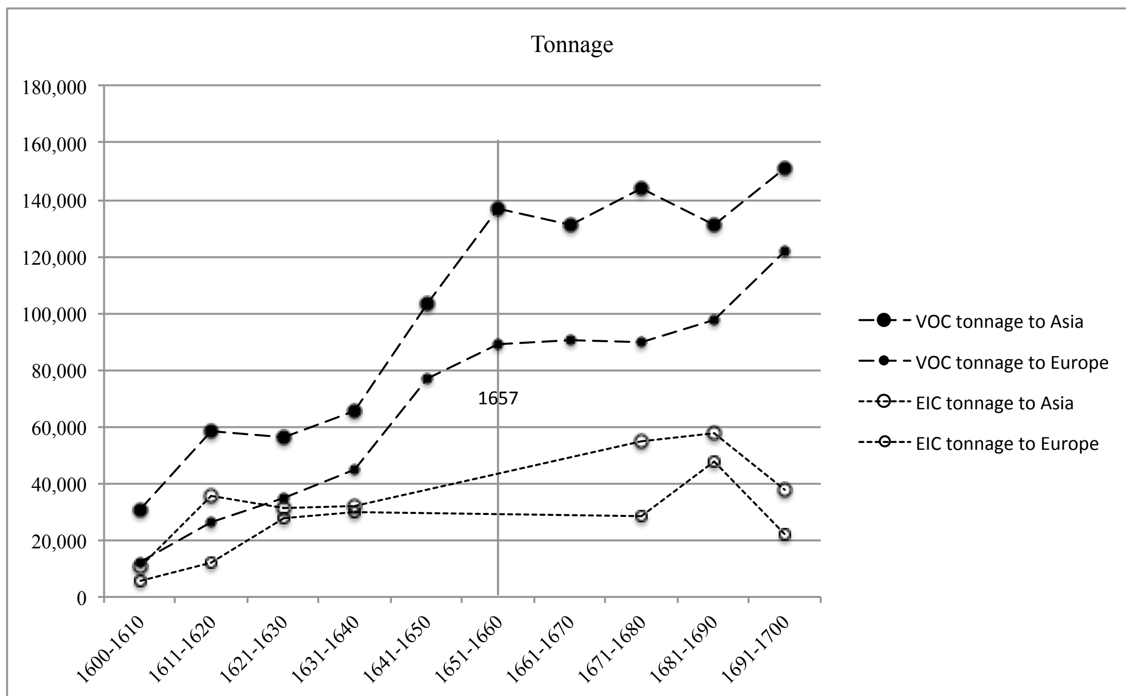


Figure 17. Personnel, 1600-1700 (number of people onboard). Source: De Vries 2003: 69-70.

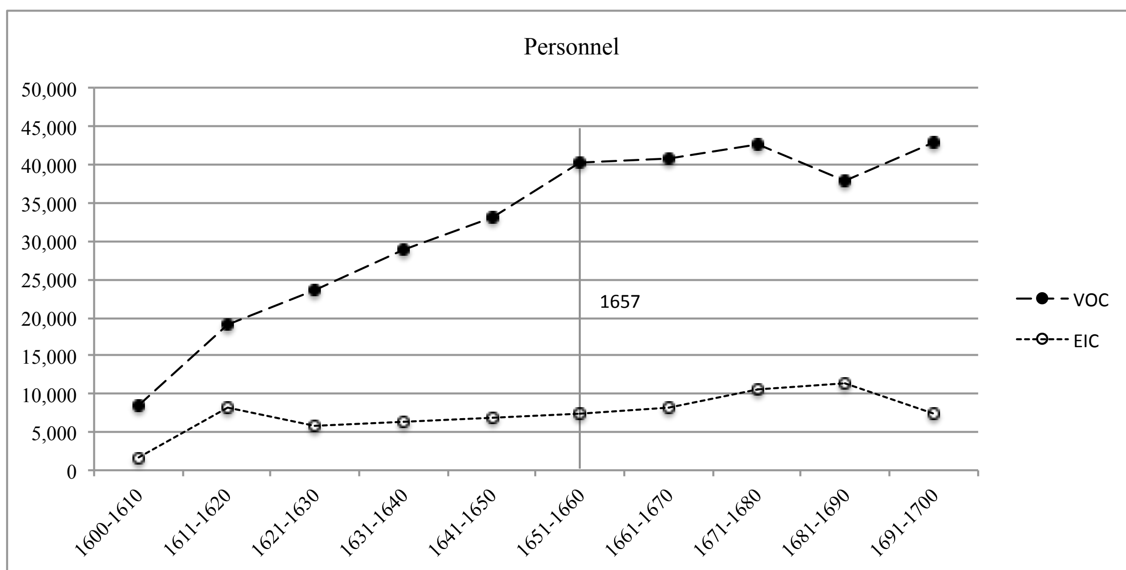
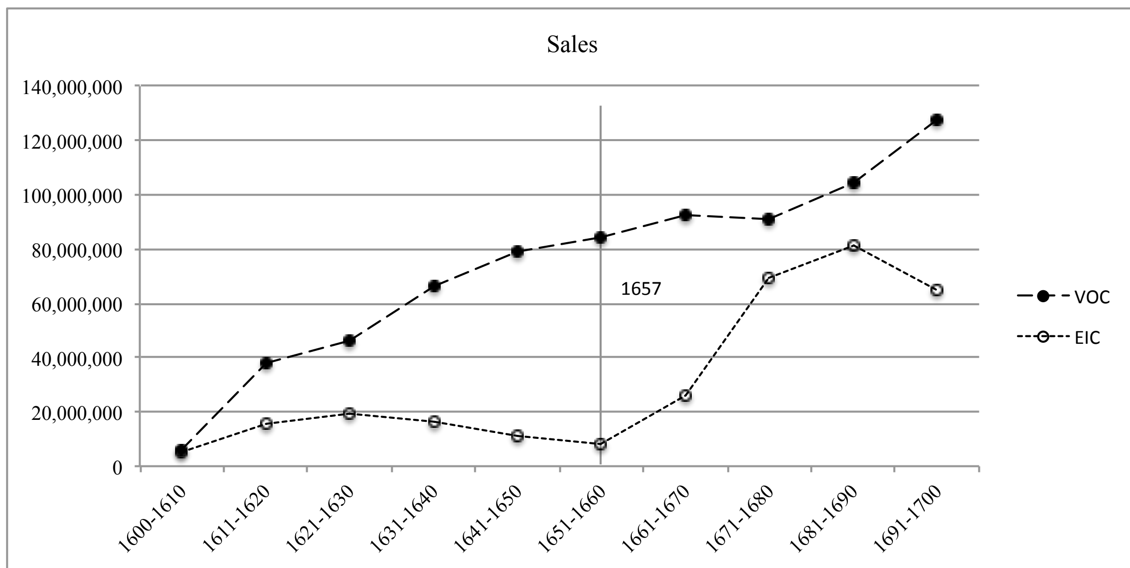


Figure 18. Sales, 1600-1700 (guilders). Chaudhuri (1978); Gelderblom et al. (2015: Appendix); de Korte (1984).



5. Conclusions

The Dutch East India Company came to dominate South-East Asian trade in the 17th century due a fundamental legal innovation: the possibility to lock-in capital for the long term. This was possible in the Dutch Republic due to its limited form of government, which reduced the risk that private capital would be expropriated by the political power. While all European countries were enticed by the enormous prospects of the Asian trade, only those with the apt political institutions were able to create large, permanent trading corporations with committed private capital. The English chartered their East India Company ahead of the Dutch but continued to operate on short- and medium-term capital for half a century. Permanent capital was introduced only when, after the Civil War, the dictatorial power of the crown was put under substantial parliamentary control, thereby limiting the risk of expropriation.

There is some evidence of a feedback loop between the development of the corporate form and the strengthening of private property rights. Acemoglu et al. (2005) argue that access to colonial trade reinforced protection of property rights in societies with less autocratic institutions, as it strengthened trading interests over traditional elites. Joint-stock companies enabled any investor to take advantage of the new opportunities, supporting a broader coalition in favor of protecting the value of overseas investments (Jha 2015). The opposite occurred in countries where colonial trade came to be under direct royal control, such as Spain.

The Dutch Easy India Company's original corporate form owed much to it

having been modeled on existing public utility bodies in the Dutch Republic such as admiralties (Gelderblom et al. 2011). Subsequently, the corporate form was slowly adopted in other countries in Europe and beyond. It remained a privilege granted by the state until the end of the 18th century, when general incorporation statutes were enacted under political pressure (Lamoreaux and Rosenthal 2006: 127). By the end of the nineteenth century most western countries had fully embraced this format (Harris 2000: 277-85; Guinanne et al. 2007). The corporate form is now the foundation of the modern market economy. Its benefits are well appreciated: permanent capital grants corporations an autonomous and indefinite life. Its side effects, such as the role of limited liability in creating risk-shifting incentives, become very visible in default, and not least in the recent financial crises.

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Appendix

Figure A1. Tonnage of ships sent to Asia from Europe, 1600-1690 (tons). Source: De Vries 2003; Flynn et al. 2003: 36-105.

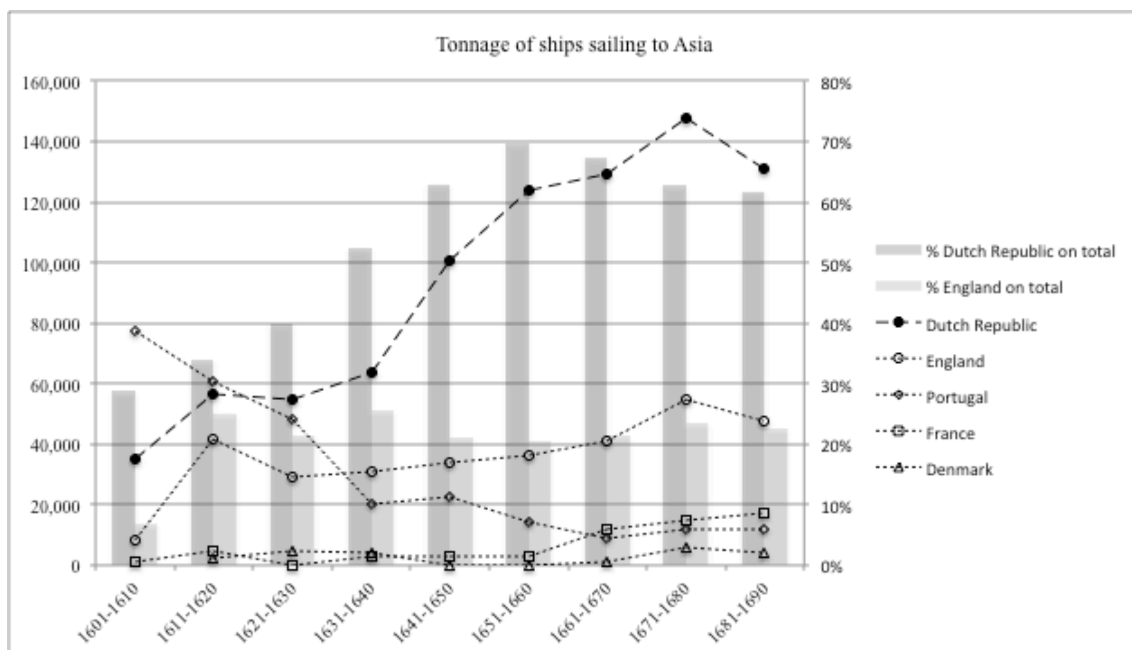

Figure A2. Personnel sent to Asia from Europe, 1600-1690 (number of people onboard). (Source: De Vries 2003: 69-70).

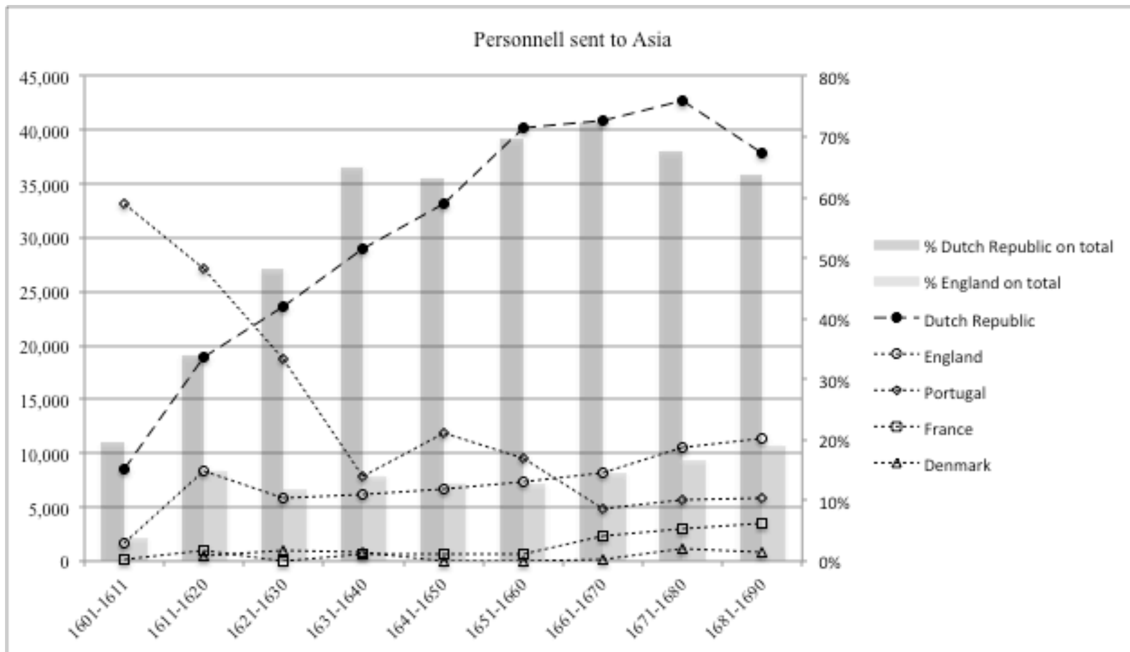

Figure A3. Personnel sent to Asia from Europe, 1600-1790 (number of people onboard). Source: De Vries 2003: 69-70.