Monarchs, institutional change, and the trade of the English East India Company[*]

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Abstract

The role of the monarchy and institutional changes in England's precious develop-ment is one of the most debated topics in economic history. We provide new insights by studying the trade of the English East India Company. Our key premise is that changes in the monarchy represented a shock to the quality of political governance when the monarch was unconstrained in the 1600s, but not in the 1700s when it was constrained by parliament. As support, the Company's history reveals numerous instances of forced loans and extraordinary taxes on the part of the English monarch in the heyday of its control. In our empirical analysis, we focus on the exit and sailing decisions for ships trading in East Indies. Our treatment is based on the return date to England, which exposed some ships to changes in the monarchy and others not. We show that ships before 1700 were more likely to exit the trade if they were exposed versus not. We also show the probability of exit differed systematically across monarchs before 1700 but not after. Finally we show that ships were more likely to delay than exit the trade after 1700 if they were exposed. More broadly, our evidence shows that responses to political shocks differed greatly across institutional environments, suggesting that constraints on the monarchy played an important role in the England's development.

Keywords: Institutions, Expropriation risk, Investment, East India Company.

JEL Codes: N4, P1, L9

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1 Introduction

England's precocious economic development during the first industrial revolution is one of the most cited examples of how institutions matter for economic development. For example, in a text on why some nations fail Acemoglu and Robinson (2012) argue that England became rich because it had a Glorious Revolution in 1688 which transformed its politics and economics. Despite such claims, there is still much disagreement on how to interpret English development. One view is that political governance was poor in the seventeenth century because the monarchy could not commit to secure property rights or sound fiscal policies. But as the monarchy became more constrained by parliament and the rule of law in the late seventeenth century, property rights became more secure, fiscal policies were more sound, and the economy began to grow more regularly.[1] A second view argues that the monarchy played no direct role in England's development because its actions were irrelevant to most economic actors, who were well protected by Common Law. Institutional changes constraining the monarchy were of minor importance in this second view.[2]

These divergent views persist in part because scholars have not been able to agree on a good empirical test of the hypothesis that the monarchy or constraining institutions contributed to investments and innovation. In this paper, we provide such a test by analyzing how shipowners servicing the trade of the English East India Company responded to political shocks under different institutional settings. We focus on the East India Company or EIC trade for several reasons. The EIC was the most important of all overseas companies. It provided trade between England and all of Asia for over two centuries starting in 1601 and played a pivotal role in establishing the British Empire in India. The EIC and its trade are also ideal for studying the effects of the monarchy and institutional change. The

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[1]See North and Weingast (1989), Acemoglu, Johnson, and Robinson (2005), and Cox (2016) for three prominent studies making this argument.

[2]The studies by Clark (1996), Quinn (2001), Bogart (2011), Jha (2015), and Murrell (2017) all speak to the monarchy and risks to different economic actors.

EIC's operations spanned the reigns of more than 10 English monarchs between 1601 and 1833 and key events like the Civil War, the Restoration of the Monarchy, and the Glorious Revolution. Also the EIC's trade was highly dependent on the monarchy up to the end of the seventeenth century. Through a royal charter, the EIC was granted a monopoly over all trade between England and Asia, meaning no other English trader could legally enter this vast market. While the monopoly was a valuable privilege, the monarch could renegotiate the terms without cause and in several cases, the monarch did exactly that. Then after a conflict over the East India Monopoly in the 1690s, the charter gained recognition by parliament and was better protected in law. In part because of its new found security, the EIC continued as a monopoly trading company for nearly a century and half, before its monopoly was ended through a lawful political process in 1833.

The key premise of our paper is that changes in the monarchy represented a shock to quality of political governance when the monarch was unconstrained in the seventeenth century, but not later when it was constrained. By political governance, we are referring to the way the political system regulated and enforced the rights of organizations like EIC. In support of our main premise there is evidence that some monarchs extorted money by demanding loans or presents in return for renewing or extending the EIC's trading monopoly during the period of royal control in the 1600s. Also some monarchs encouraged 'interlopers' to enter the EIC's market undermining its profits. Moreover, the narrative history suggests that renegotiation of the charter, bribes, and the like often occurred in the wake of a monarch change, implying such events raised the risk of extraction.

In order to test how responses to monarch changes differed across institutional environments we focus on ships trading in East Indies, also known as East Indiamen. Due to an early decision by the EIC's directors, most of the ships in its trade were owned by groups of individuals, who leased them to the EIC for each voyage. There was an understanding between the EIC and shipowners that new vessels would be hired for multiple journeys.

However, shipowners sometimes opted out of this implicit contract, resulting in ships leaving the trade after one or two journeys. Such exits were costly to shipowners because their ships were specially built for the East Indian trade.

Why did East India ships exit so early? Was it related to changes in the monarchy? Our first regressions examine ship-level decisions to sail or exit the trade depending on whether a ship returned to England around the time of a change in the monarchy. The ship-level data are derived from Farrington's (1999) transcription of the EIC ship books. It provides details on each voyage, including date of sailing to Asia from England and date of return to England from Asia. For each return to England, we create an outcome variable identifying whether the ship permanently exited the trade or sailed again. The main explanatory variable is an indicator if the ship's last arrival occurred within a year of the monarchy changing, or what we call exposure to monarch changes. The regression also includes fixed effects for ships, number of previous voyages, decade of last arrival, and month of last arrival.

Our first main result is that before 1700 exits were significantly more likely when ships were exposed to monarch changes, but after 1700 ship exit decisions were largely unaffected by exposure to monarch changes. These results suggests that in the period when the monarchy was unconstrained, shipowners behaved as though changes in the monarch were a negative shock to expectations about future profits.

Our second main result builds on the methodology of Jones and Olken (2005) which identifies how quality of leadership matters. We find that before 1700 the probability of ship exit differed across monarchs, but after 1700 the probability of exit differed little across monarchs. This finding suggests that shipowners behaved as though changes in the monarchy represented a fundamental change in the quality of political governance only when the monarchy was unconstrained.

Our third main result is that after 1700 shipowners delayed their departures to Asia when the monarchy changed, but this did not apply to the period before 1700. These

results are consistent with a model where shipowners after 1700 did not have strong negative expectations of how monarch changes affected their profits, but they were not sure about the governance quality of the incoming monarch. Hence they delayed until they learned more. By contrast shipowners before 1700 behaved as though they had strong negative expectations about how monarch changes affected their profits and hence the option of waiting to learn more was less valuable.

The main contribution of this paper concerns the effects of the monarchy and institutional change in England's development. There is a huge economic history literature examining this issue and it has been the basis for developing broader theories of economic development (see Acemoglu and Robinson 2012). Nevertheless it is quite polemical and many well known economic histories of the industrial revolution have downplayed the role of the monarchy and institutional change (Clark 2008, Allen 2009, Mokyr 2010). We would argue that the economic importance of the monarchy and institutional change is still debated because quantitative evidence has been limited. For example, there is no research examining the effects of political risk on firm-level investment, entry, and exit decisions in England during the seventeenth and eighteenth centuries. This paper provides such evidence, in showing that the exit decisions of firms directly dependent on the monarchy for their rights were affected by shocks to monarchy.

Our results are also consistent with scholars, like Jha (2015) who argue for the centrality of executive discretion in overseas trading companies. Jha (2015) argues that investors in overseas companies believed that executive discretion was contributing to expropriation risk. Their concerns were so great, they were willing to support a Civil War against the monarch. Our findings push this argument further by demonstrating that shocks to monarchy affected trading decisions for the most important overseas trading company.[3]

This paper also contributes to a vast literature focusing on the EIC, its trade, and larger

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[3]The history of infrastructure improvement companies like turnpike trusts and river navigation companies provide another example of how executive authority affected investment (see Bogart 2011).

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effects on the global economy.[4] Most prior works examine how the EIC and the English government established colonial power in India (Bowen 2005, Stern 2011). Those most related to this paper emphasize the role of English politics in determining EIC's trading privileges (Sutherland 1962, Philips 2013, Bogart 2017) and those studying its business and trading decisions (Chaudhuri 1978, 1993, Erikson 2014). Our paper adds to the literature in two ways. First, we significantly augment existing databases on EIC shipping and make them available to scholars. Second, this paper is the first to empirically analyze the effects of the monarchy on EIC shipping and trade.

The rest of the paper is organized as follows. Section 2 provides background on the EIC and its relations with the English monarchy. Sections 3 reviews EIC shipping and its organization. Section 4 introduces new data on EIC shipping. Sections 5, 6, and 7 analyzes ship exit and turnover times. Section 8 concludes.

2 Background

The English East India Company or EIC was one of several European trading companies operating in the East Indies (i.e. modern day China, India, and Indonesia). They were involved in a triangular trade, in which new world silver was brought to Europe, and then purchased as 'exports' to Asia. After arriving in Asia, approximately six months to one year later, the exports were sold and the proceeds were largely used to purchase 'imports', like cotton textiles, spices, tea and other goods. Some of the revenues from imports were used to purchase exports in Europe, one or two years later.

In Asia and the wider European market, the EIC competed with Dutch, Portuguese, French, Danish, and Swedish East India companies. Table 1 reports the total shipping tonnages bound for Asia for all companies in each European country. The Portuguese were

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[4]See Scott (1912), Chaudhuri (1965, 1978, 1993), Sutherland (1962), Horwitz (1978), Watson (1980), Desai (1984), Carlos and Nicholas (1991), Lawson (1993), Bowen (2005), Hejeebu (2005), Robins (2006), Webster (2009), Stern (2011), Philips (2013), Solar (2013), Erikson (2014), and Bogart (2017) for works on the EIC. See De Vries (2003, 2010), Rei (2011), Gelderblom et. al. (2013), and Dari-Mattiacci et. al. (2014) for comparative works, especially relating to the Dutch Company.

the leaders in the 16th century. The Dutch leapfrogged the Portuguese in the early 17th century. The English emerged as well, but are in second place. From 1630 to 1730, English shipping tonnage grew, but its share of total tonnage falls. This was mainly due to the continued growth of the Dutch and the emergence of the French trade. The turning point for English trade was the mid-18th century. English tonnage grew faster at that point and was the clear leader in the 1820s.

Table 1: Asian Bound Shipping Tonnage Among European Companies

Period	English	Dutch	Portuguese	French	Danish	Swedish	England % of Total
1581-90	0	0	55,419	0	0	0	0
1631-40	31,179	63,970	20,020	3000	4000	0	25.5
1681-90	47,879	130,849	11,650	17,500	4000	0	22.6
1731-40	67,880	280,035	13,200	53,891	12,267	7,368	15.6
1781-90	228,315	243,424	8,250	130,490	63,461	0	33.9
1820-29	859,090	178,000		168,180	22,770	6730	60.0

Source: De Vries (2003, pp. 46-49), Solar (2013, p. 649).

The history of the EIC has been written from many different perspectives. Part of the literature focuses on the role of the EIC within India with a focus on the rise of empire.[5] Another part of the literature focuses on the business organization and trade aspects of the EIC.[6] Yet another literature focuses on English or European politics[7] There are two major themes with respect to politics. One is the significance of war in Europe and how it both disrupted trade and shaped the EIC's strategy in Asia. The second theme is the central role of the English monarchy. As the monarchy plays a crucial role in this paper, we provide more background on this issue.

The Company was founded by a charter from Queen Elizabeth in 1601. The original charter gave the EIC a monopoly over all trade between the East Indies and England. In addition, it was granted corporate powers, rights to export silver, and assistance from the

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[5]See Bowen (2005), and Stern (2011) for prominent examples.

[6]See Chaudhuri (1965, 1978, 1993), Watson (1980), Carlos and Nicholas (1991), Hejeebu (2005), Webster (2009), Solar (2013), and Erikson (2014).

[7]See Scott (1912), Sutherland (1962), Horwitz (1978), Philips (2013), and Bogart (2017).

Royal Navy. The charter also stated that the monarch had the right to collect special duties on East Indian imports, and when necessary the EIC had to follow its foreign policy directives. Importantly, the final clause allowed any provision of the charter to be voided with three years notice, if it was deemed not profitable to the current monarch, its heirs and successors, or to its realm (see Hill 1887 for details on the charters).

The narrative history on the EIC suggests that several monarchs exploited their legal power over the EIC.[8] For example, several monarchs demanded loans, often under the threat of charter renegotiation. Notably several forced loans were made in times when executive power was changing. The loan in 1641 to Charles I came just before the Civil War between the monarchy and parliament. The loan in 1643 to the Long Parliament happened just after the start of the Civil War. The loan in 1659 to the Council of State was made shortly after the death of Oliver Cromwell, England's leader during its brief Republic. Finally, the loan in 1662 to Charles II came two years after the Restoration of the Monarchy in 1660.

Besides loans, some monarchs also demanded financial payments from the EIC or levied new taxes on its trade. Sometimes the EIC offered gifts to the monarchy, which could be interpreted as bribes to protect its monopoly. As in the case of forced loans, several occurred in the wake of changes in the monarchy. The gift to the new King Charles II in 1660 is one example. The additional import duties imposed by the new King James II in 1685 is another example. Two other examples include the additional dues levied by the new King William shortly after the Glorious Revolution in 1688, and those imposed by Queen Anne, shortly after the start of her reign.

The monarch's support or tolerance of interlopers was another problem for the EIC. Interlopers were traders seeking to enter the Asian market and capture some of the EIC's profits. Several interlopers offered bribes to the monarch in order to gain market access. The monarch would then leverage these bribes to extract more from the EIC. Kings James I employed this strategy immediately after becoming King in 1604. The entry by the Assada

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[8]The treatment of the EIC's monopoly is summarized in Bogart (2017).

Adventurers in 1648 shortly before the execution of King Charles I is similar, although here interlopers were appealing to the Long Parliament then in power.

The Glorious Revolution of 1688 is perhaps the best example of the link between changes in the monarchy and interloper threats. The Revolution saw the overthrow of King James II by William of Orange, who received the help of English elites hostile to James II's rule. In the wake of this major political change, several interlopers became influential in parliament. Starting in 1689, they lobbied the new King William to enter the East Indian trade. The interlopers were unsuccessful at first. The EIC was able to maintain its monopoly up to 1695 by making significant bribes to the monarch and government ministers.

The interloper challenge re-emerged in 1697 when King William desperately needed a war-time loan. The EIC offered the King £0.7 million at 4% interest. An interloper syndicate offered £2 million at 8% interest with the expectation that they would get the monopoly. To put these figures into perspective, the net value of the EIC's assets were a little over £1 million in 1695, and its annual exports plus import revenues were approximately £0.5 million.[9] King William accepted the larger offer of the interlopers, and, by an Act of Parliament in 1698, monopoly rights over the trade were given to a 'New' East India Company. The 'Old' EIC was supposed to wind up by September 1701. However, the Old EIC began a successful lobbying campaign to re-establish its trading rights. Early in 1702, King William approved a merger between the New and Old Companies. The merger took several years to implement and was only finalized in 1709 following an EIC loan of £1.2 million to Queen Anne.[10]

The conflict over the monopoly in the 1690s led to important institutional changes con-

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[9]Assets and liabilities are taken from Scott, Constitutions and Finance, (1912 Vol II, pp. 123-128, 177-179). Chaudhuri (1978) provides data on export and import revenues, which together I define as sales.

[10]For a full discussion of these events see Scott (1912, pp. 150-189). The forced loan of 1709 was not the last extraction of the 18th century. In 1730 and 1744 parliament and the monarchy secured additional loans or payments from the EIC. The 1730 event is notable because it coincided with a proposal by interlopers to transfer the monopoly to a new company (Sutherland 1962, p. 29). The EIC got an act of parliament extending its monopoly trading rights to at least 1769. In return the Company made a £200,000 payment to King George II and accepted a lower interest rate on the £3.2 million debt owed to it by the government.

cerning the EIC's charter. In 1698, Parliament sanctioned the East India monopoly for the first time. In 1712 another act of parliament stated that the monopoly would last at least until the year 1733. Several more Acts in the eighteenth century would extend the monopoly to longer terms. These legal developments, starting around 1700, had two important consequences. First, the monarch could no longer unilaterally threaten to end the EIC's monopoly as in the seventeenth century. Now the monarch would need to gain the consent of the House of Commons and House of Lords. Second, if the law was followed, the EIC monopoly could only be ended when its charter was set to expire. This restricted the ability for the monarch or parliament to renegotiate opportunistically.

In the eighteenth century, the monarchy was still important to the EIC because it appointed the ministers, who controlled majorities in the Commons. The continuing significance of the monarch is evident in the events that led to the end of the EIC's monopoly over the Chinese trade. The details are informative in showing how the rule of law conditioned the role of politics.[11] The Chinese monopoly was due to expire in 1833 unless renewed by an act of parliament. In 1829 the government, led by the Duke of Wellington, signaled an interest in ending the China monopoly. But the outcome was not certain as the EIC still had strong connections to the government in power. Then King George IV died in June 1830, leading to the formation of a new government under Lord Grey. As it turned out Grey's government was more critical of the monopoly and less connected to the EIC. The new government under Grey worked successfully to end the EIC's China monopoly in 1833. In fact, it ended the EIC as a commercial body. Unlike attacks on the monopoly in the seventeenth century, this final reduction in the powers of the EIC was done through a lawful process, which explains why it was so broadly accepted.

The importance of politics in the long history of the EIC is nicely summarized by Philip Lawson (1993, p. 74) "...when the EIC experienced its worst troubles, there was matching instability in national politics." Troubles came in the form of forced loans, extraordinary

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[11]This case is discussed by Phillips (1961), Webster (2009), and Kumagi (2012).

tax levies, tolerance for interlopers, and attacks on the monopoly. We build on this idea and use an observable moment of instability–changes in the monarchy–to identify shocks to what we call political governance (i.e. the way the political system regulates and enforces the rights of organizations). We then study how these shocks influenced the EIC's trade starting with the decisions of shipowners.

3   EIC shipping

Ships were one of the most important assets in the EIC's trade. Chaudhuri's (1976, 1993) study of the EIC reveals its 'Shipping Committee,' appointed by the Board, set a target for the number of sailing ships in the trade each year. In order to meet its targets, the EIC leased ships from private owners. Shipowners were paid for freighting each voyage based on the tonnage of their ship. There was an agreed upon return date to England, after which shipowners would be paid a fee for each day. The task of delivering goods across the world was complex and therefore the EIC sought shipowners with substantial experience, usually London merchants. Moreover, shipowners were often EIC shareholders, giving them additional incentive to perform their duties.

The choice to lease led to another hold-up problem because EIC ships were were generally larger than other ships in the English fleet and thus were not as economical in other trades. In fact, they were called 'East Indiamen' because of their distinctive size. In order to address the hold-up problem, Chaudhuri (1993) notes there was an agreement that ships would be hired for multiple voyages. This arrangement was formalized in 1668, when the directors announced that new ships would be employed for at least 14 to 16 years. In the eighteenth century the agreement was that the ship be employed for at least four voyages.

Each voyage in the Asian-European trade began with a departure from England. The shipowners would recruit the captain and the crew for each voyage. Ships generally departed England during the season which lasted from November to May. There was a main destina-

tion port in Asia, where the ship was supposed to deliver exports and pick up imports. The main Asian ports were in India and China, where textiles and tea were sold. Ships would stop in other Asian ports to accumulate more imports. These extra stops would allow ship captains to engage in local trade, which represented a highly profitable side business to captains (Erikson 2015). In some cases, EIC ships remained in Asia, permanently engaging in local trade or to assist in company operations in Asia.

EIC ships could encounter several problems while sailing, many of which were fatal. First, some ships were sunk or badly damaged by storms. Second, some ships were damaged due to errors by the captain and crew. For example, they might sail into a sand bar or rocks. Third, some ships were attacked by enemies and either taken or damaged beyond repair. The enemies could be pirates, rival companies, or foreign navies, most commonly the Dutch and French. Sinking and takings meant serious losses to shipowners because insurance was generally only available for cargo, not for the ships themselves.

If a ship successfully returned to England from Asia then a series of important decisions were made. First, the ship might exit the trade. By the agreement with the EIC, the ship was supposedly guaranteed four voyages. However, the shipowner could always end the agreement. Perhaps the EIC could also end the agreement, albeit at the some reputation cost from breaking its promise to shipowners. If the ship stayed in the trade, it began preparing for the next voyage. Ships could be turned and ready for another Asian voyage in four to six months. But longer stays in England were sometimes needed as ships had to be repaired and new captains found. Crucially once a ship left for Asia it could not easily return. The decision to sail to Asia was essentially irreversible.

The potential sequence of voyages for EIC ships is represented in figure 1. The blue circles and arrows represent the typical plan, including departures in England, destinations in Asia, and returns to England. The orange circles represent deviations from typical plan, either because the ship is sunk, taken, or it voluntarily exits the trade upon returning to

Figure 1: Voyage cycles and exits for EIC ships
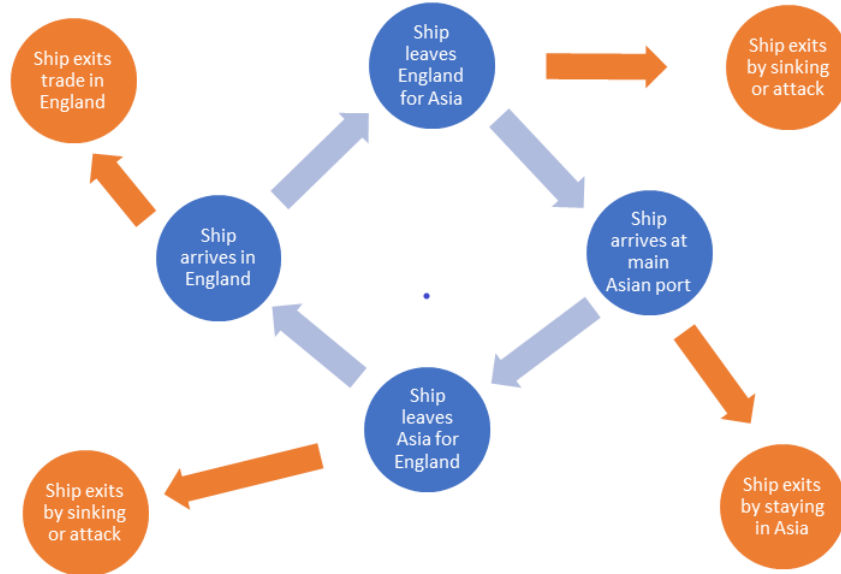
England.

Our hypothesis is that changes in the monarchy influenced shipowner's decisions to exit the English-Asian trade by affecting expectations about shipping profits. We also hypothesize that changes in the monarch mattered more in the seventeenth century when the EIC's charter could be renegotiated by the monarch at will. There are three possibilities we consider in a scenario where the monarch has significant renegotiation power. First, expectations could be negatively affected because changes in the monarchy increased the risks of extraction. Extraction risks could rise for several reasons. The narrative history suggest that EIC had to invest in political connections in order to secure its monopoly (Bogart 2017). When there was a new monarch those connections weakened considerably, requiring the EIC to re-invest or face the threat of entry by interlopers. In many cases, negotiating with new monarchs was costly in terms of bribes, forced loans, and new taxes. The increased payments drained the EIC's resources and limited its purchases of silver for export. That would have meant lower expected profits from voyages to Asia. Since many shipowners were also shareholders, extractions would have also affected their wealth and

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perhaps their ability to finance voyages.

The exit implications of a change in the monarchy can be summarized with a simple model drawn from the political economy literature.[12] Suppose when a ship returns to England its owner must decide whether to stay in the trade or exit. Suppose that when making this decision there is some probability p that the monarch will extract from the EIC, which will lead to lower profits for shipowners. If the monarch does not extract, then the profits from staying in the trade are represented by Π^s and let $\Pi^s - e$ be its profits from staying and experiencing extraction represented by payment of e. Finally suppose the ship can exit the trade and earn Π^e. We assume that the ship does not face an extraction threat once it exits. The ship is either scrapped or it enters a free trade where the monarchy has no influence. Under these assumptions, the ship will stay in the trade only if $p(\Pi^s - e) + (1 - p)\Pi^s > \Pi^e$ or $p < (\Pi^s - \Pi^e)/e$. To make the problem interesting, we assume the profits from exit are lower than the profits from staying absent extraction, $\Pi^e < \Pi^s$. Therefore, the ship faces a real choice to exit or not. Besides the profits, the key parameters are the relative size of p and e. If changes in the monarchy raised the probability of extraction to a sufficiently high level or if shipping profits were sufficiently lowered by e, then the ship was more likely to exit.

The second possibility we consider is that changes in the monarchy marked a transition to new expectations about the monarch's governance quality more generally. This problem can be illustrated using the same framework for extraction risks. Suppose the probability of extortion was p^1 under the previous monarch and p^2 under the new monarch. If $p^1 < p^2$ then ships will be more likely to exit under the new monarch 2. But if $p^2 < p^1$ then ships will be less likely to exit under the new monarch 2. A similar analysis applies to the expected loss in profits from an extraction e, which could differ by monarch.

The third possibility we consider is that changes in the monarchy introduced uncertainty about extraction risks or governance quality more generally. In theory, uncertainty

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[12]See Persson and Tabellini (2002, ch. 12) for a review of the literature on commitment problems.

in expectations could lead to delays in the decision to sail for Asia or exit the trade.[13] To clarify, again consider the extraction problem and suppose that when the monarch changes the probability of extraction p becomes uncertain, meaning it could be high or low. If p is low then the ship will want to stay in the trade and if p is high the ship will want to exit. Suppose also that if the ship waits a certain amount of time then the true probability will be revealed. The possibility of learning creates a value to waiting and delaying the decision to sail or exit. But waiting also entails a cost because the shipowner will earn zero profits from its ship while waiting. Therefore as long as the shipowner is sufficiently patient and as long as the uncertainty about p is large enough (meaning they are not sure the monarch has really bad quality or good quality), then the shipowner may delay the stay or exit decision when there is a change in the monarchy.

The three channels proposed above generate testable predictions. First, ships that are exposed to changes in the monarchy should have a higher probability of exiting the trade than ships which were not exposed all else equal. Second, if changes in the monarchy marked a transition in governance quality, then probability of exit should differ in the periods before the monarch changed compared to the periods after the monarch changed. Third, if changes in the monarchy increased uncertainty about governance then ships exposed to changes in the monarchy should experience longer turnover times in England compared to ships that did not get exposed. We now test these hypotheses using data on shipping.

4   Data on EIC ships

We use two sources to empirically examine EIC shipping. First, Farrington (1999) lists departure and arrival dates for 1,474 ships in the service of the EIC between 1601 and 1834. For example, Farrington lists when a ship departed England on its first voyage and when it returned to England. Moreover, Farrington often lists arrival dates for all ports visited in

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[13]See McDonald and Siegel (1986), Caballero (1991), Rodrick (1991), Dixit and Pindyck (1994), Abel and Eberly (1994), and Bloom et. al. (2007) for theoretical models on investment and uncertainty.

Asia. If the ship has subsequent voyages, Farrington records the departure in England and return dates in England, except in cases where the ship was sunk, attacked, or remained in Asia. In those cases, Farrington does not records a return date to England.

As a second source, Hackman (2001) lists of ship voyages, including their departure and arrival dates in England. Hackman's information is similar to Farrington, but it is especially detailed on the reasons for ship exit. Hackman appears to identify most ship sinking due to weather, accidents, or attacks by foreign navies, pirates, and privateers. Hackman also often records the owners and whether a ship was scrapped or whether it transferred to another trade or remained in India. Unfortunately, Hackman is only detailed on ship ownership and ship transfers to other trades after 1708, so it cannot be used to assess the 17th century. Nevertheless Hackman is a valuable source so we make use of it.

The starting point for our analysis is Farrington's list of 1,474 ships in part because it is has been used by previous scholars like Erikson (2014).[14] Next we match the ships in Hackman to Farrington based on name and dates of sailing. The match rate for 489 Hackman ships from 1600 to 1708 is 75% and the match rate for 865 Hackman ships from 1708 to 1834 is 96%. The Hackman ships that are not matched to Farrington appear to be exceptional, especially before 1708.[15] Also some of the unmatched ships in Farrington are dropped because they have too many missing observations on departure dates or arrival dates. Our final sample contains 1,311 ships. We classify them into two general types based on their type of exit. Group 1 contains ships that exit after returning to England on their last voyage. Group 2 contains ships that exit but do not return to England on their last voyage. Group 2 is further separated into four sub-groups based on information in Hackman: (i) ships that were sunk or lost due to weather or crew error, (ii) ships that were sunk or taken by enemies, (iii) ships that stay in Asia, and (iv) ships where Hackman does not

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[14]I thank Emily Erikson for kindly sharing a digitized version of Farrington's data on ships.

[15]Before 1708 many unmatched ships in Hackman were built in India and did not sail to England more than once. Many were also sent to Asia, it appears with the intention to remain their permanently. Some unmatched ships were surveyed but their charter was not taken up. Others simply had little accompanying information in Hackman.

identify why they did not return to England.

The number and percent of ships exiting according to each group and sub-group is shown in table 2. Just over two-thirds (68%) of ships fall into group 1, meaning most exit after returning to England on their last voyage. In group 2, the most common outcome is for ships to exit because of damage due to storms or accidents (13%). The next largest group is the ships that exit for unknown reasons (9.6%)

Table 2: Classification of ship exit

Exit types	Number	Percent
1. Ships that exit after returning to England on their last voyage	891	68.0
2. Ships that exit but do not return to England on their last voyage	420	32.0
from 2. (i) ships that exit because of damage due to storm or accident	170	13.0
from 2. (ii) ships that exit due to being attacked by enemies	77	5.9
from 2. (iii) ships that exit by remaining in Asia	47	3.6
from 2. (iv) ships that exit for unknown reasons	126	9.6

Source: Author's calculations based on Farrington (1999) and Hackman (2001).

Exit became increasingly likely as the number of past voyages increased. To illustrate this pattern, we calculate the survival rate of ships as a function of their past voyages for group 1 ships. The survival rate is shown in figure 2 for two periods, 1601 to 1699 and 1700 to 1833. The survival rate falls steeply after 2 or 3 voyages in both periods. But note the pre 1700 survival rate was lower after 1 or 2 voyages. Also no ship survived beyond 8 voyages pre 1700. The differences in survival rates pre and post 1700 will be key to our analysis below.

We also calculate a hazard rate, or the probability of exiting conditional on completing 1, 2, 3, 4, or 5 previous voyages in the pre and post 1700 period. This is shown in the right hand graph of figure 2. The probability of exit is around 0.23 for all ships that completed one voyage before 1700. It rises steadily for 2, 3, 4, and 5 voyages. After 1700 the probability of exit is very low for ships completing 2 or 3 voyages. Then it rises significantly after 4 voyages. Recall that per the agreement with shipowners, the EIC supposedly guaranteed at least 4 voyages. This arrangement only held for ships sailing after 1700.

Figure 2: Survival and hazard rate for ships based on past voyages
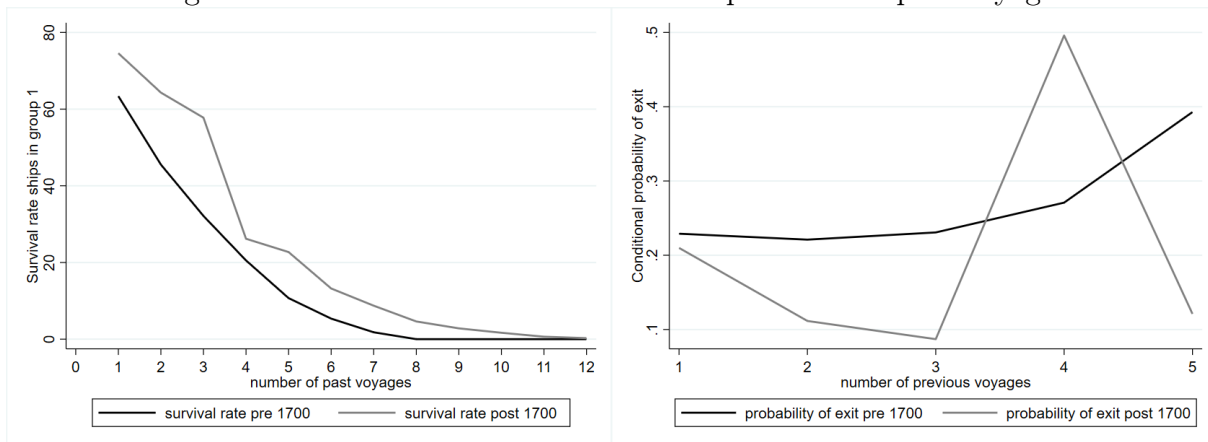
Source: Author's calculations based on Farrington (1999) and Hackman (2001).

We also use Farrington's data to calculate turnover times in England. Turnover time is defined as the number of days between a ship arriving in England and the ship departing for Asia. In order to observe turnover time a ship must return to England and then sail again to Asia. In other words, it cannot exit. In total we observe 2,828 turnover times, but only 292 of these are observed for the period before 1700. In part, this is due to the high level of ship exit before 1700.

5 Changes in the monarchy and ship exit

In order to test our hypotheses on how changes in the monarch affected ship exit, we define an exposure window based on when the ship returns to England. In the baseline analysis, a ship is coded as exposed if its return date to England was within one calendar year of the monarchy changing and the ship had not yet departed for Asia before the monarch changed. Below we consider alternative definitions of the window as well as leads and lags.

The dates of changes to the monarchy are listed in table 3 and are based on political histories (Holmes 1993, Holmes and Szechi 1993, Evans 2014). Dating is straightforward in many cases because they are due to deaths. But others like the Civil War, Restoration, and Glorious Revolution are more complex. The Civil War (1642-1648) and Interregnum (1649-

1659) periods are particularly difficult because it is not clear who held executive power. In the baseline specification, we code the monarchy as changing with the beginning of the Civil War on 22 August 1642 and the execution of Charles I on 30 January 1649. The coding is arguably more precise followed the death of the Lord Protector, Oliver Cromwell, in 1658. The Restoration of the Monarchy is dated as occurring on 4 April 1660 when Charles II issued the Declaration of Breda. The reign of King William is assumed to start on 23 December 1688 when James II fled England. In all subsequent cases, the monarchy changed with deaths due to ill health.

Table 3: Dates of monarchy change, 1625 to 1830

Date	Description
3/27/1625	Death of King James I
8/22/1642	Start of the English Civil War
1/30/1649	Execution of King Charles I
4/4/1660	Restoration of Charles II, specifically the Declaration of Breda
2/6/1685	Death of King Charles II
12/23/1688	Glorious Revolution, specifically King James II flees England
3/8/1702	Death of King William III
8/1/1714	Death of Queen Anne
7/27/1727	Death of King George I
10/25/1760	Death of King George II
1/29/1820	Death of King George III
6/26/1830	Death of King George IV

Source: Dates are derived from Holmes (1993), Holmes and Szechi (1993, and Evans (2014).

The main outcome variable in the exit analysis is an indicator equal to 1 if the ship exited the EIC trade after returning to England and 0 otherwise. Note the exit variable is always coded 0 if the ship was in group 2, where exits occurred because of weather, crew error, attack, or a decision to remain in Asia. Arguably these ships did not exit by the choice of the shipowners or EIC. They are included in the baseline and attrit at some point in their history. Our analysis excludes all ships returning to England after 1832 because in 1833 the EIC ended as a commercial company due to an Act of Parliament. These years were extraordinary in that nearly all returning ships exited the trade. In other words, there

Figure 3: Ship exit and exposure to changes in the monarchy

1601 to 1699

1700 to 1832
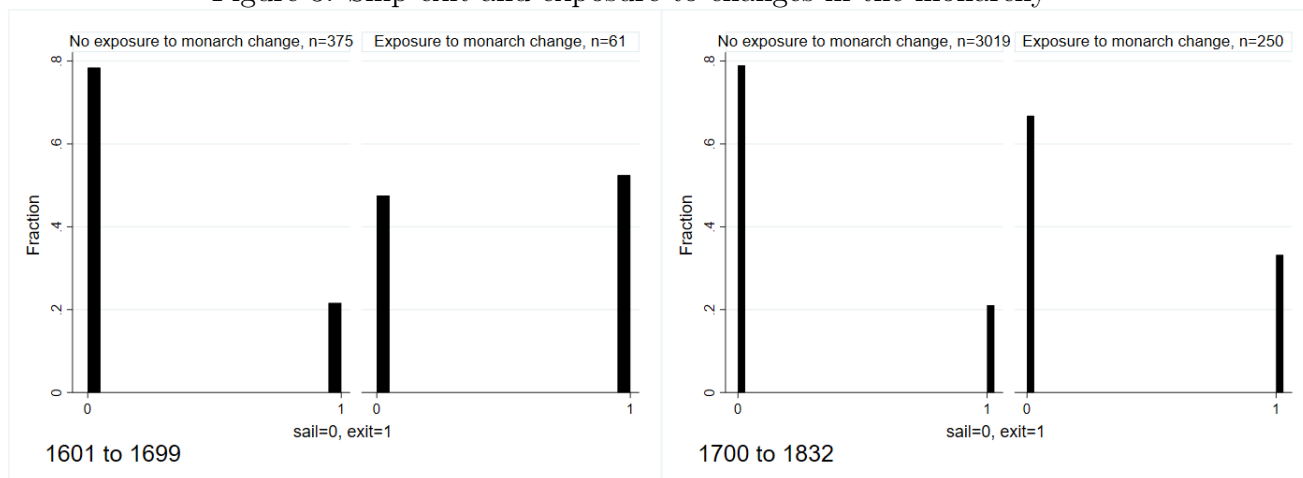
was no real possibility of sailing again as an EIC ship.

Summary statistics illustrate the key patterns. On average, ships that returned to England during a change in the monarch were more likely to exit than ships that returned to England in other times. This pattern is illustrated in the left graph of figure 3 for the period before 1700 and on the right after 1700. The effects of exposure appear much larger before 1700. In fact, ships were more likely to exit than sail when exposed before 1700. After 1700 the differences by exposure are less stark. Ships were always more likely to sail than exit, even when exposed.

The effects of changes in the monarchy are tested more rigorously using regressions that exploit within ship variation in exposure. The baseline specification is a fixed effects linear probability equation,

$$exit_{ik} = \alpha_i + \beta MonarchChange_{ik} + VoyageFE_{ik} + DecadeFE_{ik} + MonthFE_{ik} + \varepsilon_{ik} \quad (1)$$

where the time-dimension is based on previous voyages. The dependent variable $exit_{ik}$ is an indicator equal to one if ship i exits after k previous voyages and 0 if it sails to Asia again, α_i is a ship fixed effect, $MonarchChange_{ik}$ is an indicator equal to 1 if ship $i's$ return date

from its kth previous voyage was in the time window surrounding changes in the monarchy, $VoyageFE_{ik}$ are fixed effects for the number of previous voyages, $DecadeFE_{ik}$ are fixed effects for the decade in which the last return to England occurred, and $MonthFE_{ik}$ are fixed effects for the month of the last return in England. The ship fixed effects capture ship-specific unobservables that might be associated with changes in the monarchy (i.e. some selection effect of who sails in unstable times). The number of previous voyages captures the different hazard rates displayed in figure 2 and ship aging effects more generally. The decade fixed effects capture general trade and technology effects that evolve with time and were possibly correlated with the monarch change. The month of last arrival fixed effects allow for exit to be influenced by the seasonality of returns.

The specification in (1) is similar to a difference in difference regression. The 'treatment' group are ships that at some point returned to England in the exposure window. The 'control' group are ships that never returned to England during an exposure window. The identification framework is illustrated in figure 4, where ship i is treated with exposure and ship j is not treated with exposure. There are two key assumptions. First, the ship's return date in England is exogenous with respect to a change in the monarchy once all the fixed effects are accounted for. This assumption is plausible given that weather and events in Asia determined the length of a voyage and made it difficult for captains to time their arrival in England. Second, the effects of exposure on expectations are short-term, being confined to one year before or one year after the monarch change. Note in figure 4 if the control ship j returns two years after the monarch change it is assumed not to be exposed. Also notice there are no anticipation effects. Ship i and j are not exposed if they return two years before monarch change. We will relax these assumptions later.

There is a potential confounding factor in that war may be correlated with changes in the monarchy. England was involved in 10 major wars between 1601 and 1833. Chaudhuri (1976, 1993) and other scholars have suggested wars were very costly to EIC trade. If they

Figure 4: Illustration of identification framework in baseline model
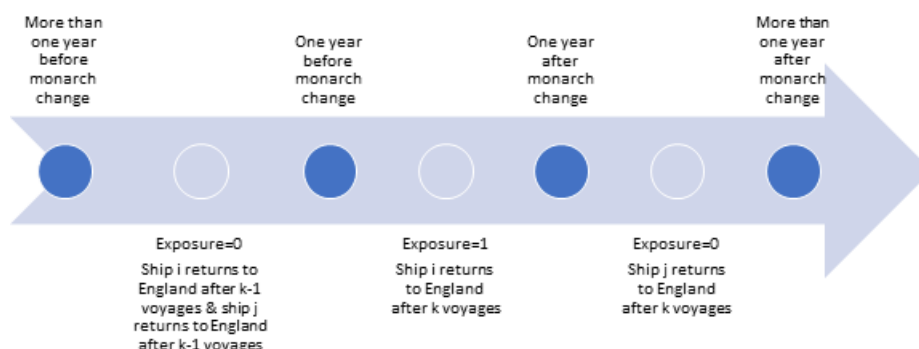
coincided with a change in the monarchy, then we could get spurious results. To address this issue, we identify the date when England declared war or when it is believed that England became involved in these wars. We then identify an exposure window similar to that for changes in the monarchy. A ship is exposed to the start of a war if it returned to England within one calendar year before the war started or one year calendar year after it started. Also to be exposed, a ship cannot have departed for Asia before the start of the war.

The results from several regressions are shown in table 4. In all specifications, the standard errors are clustered on ships. The baseline specification in (1) considers the entire sample from 1601 to 1832. The estimates show that the probability of exit increased by 0.094 when a ship was exposed to a change in the monarchy. The estimated effect is reasonably large. The mean probability of exit was 0.224, implying monarch change had an exit effect equal to 42% of the mean. The specification in column 2 adds exposure to war as an additional control variable. The results show that exposure to the beginning of a war significantly increased the probability of exit. However, the estimated effect of exposure to monarch change is similar. In other words, war does not fully explain the effect of monarch changes. The relative magnitudes of exposure to war and monarch changes are informative.

The effects of monarch change are approximately equal to one another, which is notable since war is believed to have such large effects on EIC trade.

Table 4: Monarch changes and ship exit

	(1)	(2)	(3)	(4)	(5)
Time period	1600-1832	1600-1832	1600-1698	1699-1832	1650-1698
Mean probability ship exit	0.224	0.224	0.261	0.219	0.297
	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.
Variable	(Std. Err.)	(Std. Err.)	(Std. Err.)	(Std. Err.)	(Std. Err.)
Exposure to monarch change	0.094	0.089	0.224	0.047	0.338
	(0.031)***	(0.031)***	(0.098)**	(0.032)	(0.115)***
Exposure to beginning of war		0.056	0.111	0.043	0.114
		(0.022)**	(0.081)	(0.021)**	(0.115)
Ship fixed effects	Y	Y	Y	Y	Y
FEs num. previous voyage	Y	Y	Y	Y	Y
FEs decade of return	Y	Y	Y	Y	Y
FEs month of return	Y	Y	Y	Y	Y
N	3,705	3,705	428	3,277	309
R-squared	0.428	0.429	0.464	0.447	0.504

Notes: The dependent variable is 1 if the ship exits after returning to England and 0 otherwise. The standard errors are clustered on ships. *, **, *** indicates significance at the 10%, 5%, and 1%.

Columns (3) to (5) in table 4 examine sub-periods. Column (3) studies the sample of ships returning to England between 1601 and 1698. The coefficient on monarch change is 0.227, or nearly equal to the mean probability of exit. Column (4) studies the sample from 1699 to 1832. The estimated effect of exposure is much smaller and is statistically insignificant. Columns (5) narrows the 17th century to 1650 to 1699. The coefficient is very large and indicates that exposure to the Restoration, the death of Charles II, and the Glorious Revolution had the largest effects on exit. That fits with the narrative history of the EIC, which points to the importance of these events and their implications for extraction and interloper threats.

As noted earlier our baseline model assumes a short-term effect of monarch changes and does not allow for anticipation effects. We now address these issues by adding a pre-exposure

window, equal to one if a ship returns to England between one and three years before the monarch change. The time span is two years because our baseline exposure window is one year before and one year after the monarch change. We also add a post exposure window equal to one if the the ship returns between one and three years after the monarch change.

The specifications adding pre and post exposure indicators are shown in table 5. They reveal several findings. First, there is no significant pre-exposure effect in any specification. Monarch changes were not generally anticipated. Second, there is a sizable post-exposure effect. The post is more precisely estimated in the period from 1699 to 1832, nevertheless the post effect is larger in the 1601 to 1698 and 1650 to 1698 periods. Therefore it appears there was some lingering effect from monarch changes that lasted for at least three years.

Table 5: Monarch changes and ship exit with pre and post exposure

	(1)	(2)	(3)	(4)
Time period	1600-1832	1600-1698	1699-1832	1650-1698
Mean probability ship exit	0.224	0.261	0.219	0.297
	Coeff.	Coeff.	Coeff.	Coeff.
Variable	(Std. Err.)	(Std. Err.)	(Std. Err.)	(Std. Err.)
Pre exposure to monarch change [t-3 to t -1]	-0.034	0.004	-0.037	-0.025
	(0.027)	(0.074)	(0.030)	(0.117)
Exposure to monarch change [t-1 to t +1]	0.105	0.252	0.061	0.360
	(0.032)***	(0.106)**	(0.034)*	(0.125)***
Post exposure to monarch change [t+1 to t +3]	0.065	0.117	0.052	0.165
	(0.027)**	(0.084)	(0.028)*	(0.112)
Ship fixed effects	Y	Y	Y	Y
FEs num. previous voyage	Y	Y	Y	Y
FEs decade of return	Y	Y	Y	Y
FEs month of return	Y	Y	Y	Y
N	3,705	428	3,277	309
R-squared	0.430	0.465	0.447	0.508

Notes: The dependent variable is 1 if the ship exits after returning to England and 0 otherwise. The standard errors are clustered on ships. *, **, *** indicates significance at the 10%, 5%, and 1%.

6 Monarch quality and ship exit

Our second hypothesis is that changes in the monarchy marked a transition in the quality of governance. For example, some monarchs might have posed a greater extraction risks or they were better at managing foreign affairs affecting the EIC's trade. If monarch quality differed in material ways then the probability of exit should systematically differ in the periods before a monarch changed compared to the periods after a monarch changed. In order to test this hypothesis we draw on the methodology developed by Jones and Olken (2005). They specify tests to identify whether national leaders mattered for economic growth in the post-World War II era. They develop a model, where leaders have some inherent quality that affects the growth rate. When the leader changes in a country, its economy gets exposed to a new governance quality. If the change in quality is large enough, then the economy's growth rate should change as a result.

Jones and Olken develop a test statistic to analyze quality. They first propose a regression with indicators for t-k to t-1 years before a leader changed and indicators for t+1 to t+k years after. The test statistic takes the difference in post and pre indicators for each leader and country and combines them into a single test statistic. We modify their test since our data are at the ship level and we are examining a common set of leaders changes rather than a unique leader change for each ship. For each monarch m we define a pre-exposure variable equal to one if a ship returned to England between one and three years before the changed and a post exposure window equal to one if the the ship returned between one and three years after the monarch changed. The specification is shown in equation (2)

$$exit_{imk} = \alpha_i + \sum_m \beta_m^{pre} MonarchChangePre_{imk} + \sum_m \beta_m^{post} MonarchChangePost + x_{ik} + \varepsilon_{it} \quad (2)$$

where the index m refers to each monarch and x_{ik} are the fixed effects for previous voyages,

decade of last return, and month of last return. Note that our baseline exposure treatment variable for ships returning to England within one calendar year of a monarch change is omitted. The emphasis in this specification is on pre post differences. Towards that aim, we calculate the F-statistic for the joint hypothesis test that $\widehat{\beta_m^{post}} - \widehat{\beta_m^{pre}} = 0$ for all monarch changes m in the pre 1700 and post 1700 periods. If we reject equality of the post minus pre exposure variables then there is evidence that leader quality differed systematically.

Table 6 reports the coefficients for the pre and post effects of monarch changes before 1700. Column (3) reports the individual post pre difference and whether it is significant. There are several findings. The death of James I led to a large decrease in the probability of exit as did the Restoration of the monarchy in 1660. The death of Charles II and the Glorious Revolution were both associated with a large increase in the probability of exit. Most importantly, the null hypothesis test that exit rates were all similar before and after monarch changes is strongly rejected before 1700 (see the bottom two rows in table 6).

Table 6: Pre and post exposure effects for Monarch changes before 1700

| | (1) | (2) | (3) |
| | Pre-exposure | Post-exposure | Post-Pre Difference |
| | Coeff. | Coeff. | |
Variable	(Std. Err.)	(Std. Err.)	
Death of James I, 1625	0.194	-0.141	-0.335***
	(0.108)*	(0.153)	
Start of Civil War, 1642	0.294	0.000	-0.294
	(0.175)*	(0.416)	
Death of Charles I, 1649	0.380	0.266	-0.114
	(0.395)	(0.225)	
Restoration, 1660	1.178	-0.089	-1.267***
	(0.315)**	(0.234)	
Death Charles II, 1685	-0.311	0.272	0.583***
	(0.078)**	(0.198)	
Glorious Revolution, 1688	-0.239	0.443	0.682*
	(0.189)	(0.328)	
Test statistic all post pre differences			4.56
P-value			0.0001

Table 7 reports coefficients for the pre and post effects of monarch changes after 1700. There are no significant differences in exit rates pre and post except for the years around the death of George IV in 1830. Recall this was the event partially led to the end of the China monopoly and the commercial trade of the EIC. Overall exit probabilities were similar before and after monarchs changed after 1700. This is confirmed by the failure to reject the null hypothesis of no difference in exit probabilities across all monarch changes.

Table 7: Pre and post exposure effects for Monarch changes after 1700

Variable	(1) Pre-exposure Coeff. (Std. Err.)	(2) Post-exposure Coeff. (Std. Err.)	(3) Post-Pre Difference
Death of William, 1702	0.010	-0.178	-0.188
	(0.114)	(0.129)	
Death of Anne, 1714	-0.108	0.062	0.170
	(0.110)	(0.077)	
Death of George I, 1727	-0.078	-0.080	-0.002
	(0.046)*	(0.061)	
Death of George II, 1760	-0.005	-0.026	-0.021
	(0.068)	(0.051)	
Death of George III, 1820	0.108	0.088	-0.020
	(0.055)*	(0.039)**	
Death of George IV, 1830	-0.241	0.026	0.267**
	(0.051)	(0.103)	
Test statistic all post pre differences			1.52
P-value			0.169

Figure 5: Ship turnover times and exposure to changes in the monarchy
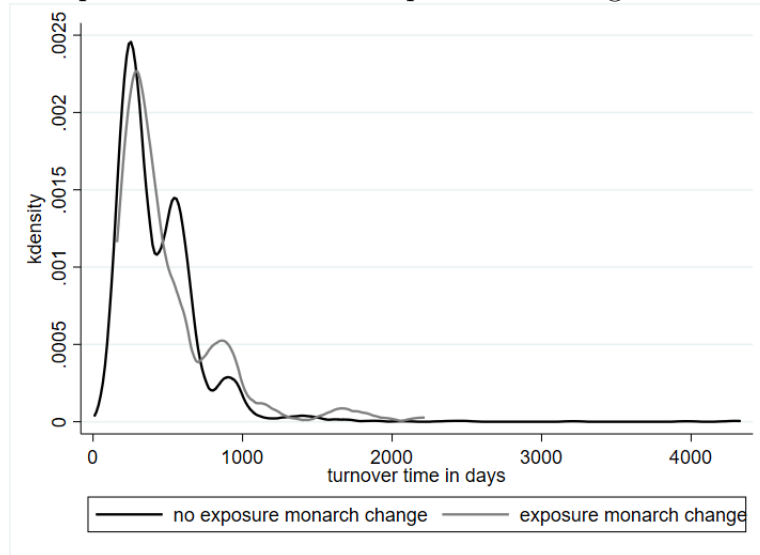
7 Changes in the monarchy and turnover times

Shipowners had an alternative to immediately exiting the trade when they returned to England: they could delay and wait to learn more about the monarch. Delays could be useful if their was uncertainty about the monarch's governance quality. In this section, we test the hypothesis that ships exposed to changes in the monarchy experienced longer turnover times in England compared to ships that did not get exposed. Turnover times are defined as the number of days between returning to England and next departure for Asia. Figure 5 plots kernel density estimates for turnover times depending on exposure. There is wide variation in both cases, and it is not immediately clear that exposure to the monarchy led to longer turnover times.

Regression analysis provides a stronger test for the effects of exposure, but there is a potential selection issue as ships which chose to sail again also chose not to exit. The ships who decided to sail again when exposed to a monarch change might have had better expectations about the monarch. In theoretical model outlined earlier, they would have put less weight on the monarch extracting from the EIC. To address this issue we use a

Heckman two step estimator. The first equation models selection to sail again or exit and uses exposure to monarch changes and fixed effects for the number of previous voyages, month of last return, and decade of last return. The second equation models log turnover time as a function of exposure to monarch changes and fixed effects for month of last return and decade of last return. Note that fixed effects for number of previous voyages is the omitted variable, which we use to explain exit versus sailing only.

The results are reported in table 8. They show a very different response before and after 1700. Before ships exposed to monarch changes exit the trade as shown by the negative coefficient in the sail equation. Those that stay do not delay their departure to Asia as shown by the small and insignificant effect in the turnover time specification. After 1700 ships exposed to monarch changes are not more likely exit, but they do significantly delay their departures. The coefficient suggest their turnover times were 12.6 log points longer, or around 13% longer. These results are consistent with a story where shipowners after 1700 did not have strongly negative expectations about their profits once the monarch changed, but they were not sure about the quality of the incoming monarch and hence they delayed until they learned more. They also consistent with the idea that shipowners before 1700 had very negative expectations about their expected profits and hence they exited. Those that did sail must have had more positive expectations and hence did not delay.

Table 8: Monarch changes and ship turnover times: Heckman selection estimates

	1601-1698		1699-1832	
Equation	Sail=1, Exit=0	Log time in days	Sail=1, Exit=0	Log time in days
	Coeff.	Coeff.	Coeff.	Coeff.
Variable	(Std. Err.)	(Std. Err.)	(Std. Err.)	(Std. Err.)
Exposure to monarch change	-1.103	-0.017	-0.089	0.126
	(0.228)***	(0.218)	(0.107)	(0.048)***
FEs number of previous voyage	Y	N	Y	N
FEs decade of previous arrival	Y	Y	Y	Y
FEs month of previous arrival	Y	Y	Y	Y
N		397		2,363
Wald Chi-Square		100.94		596.86

8 Conclusion

This paper examines the trade of the English East India Company. The English monarch gave the EIC a valuable trading monopoly, but for much of its history, the monarch could renegotiate the EIC's charter unilaterally. Some monarchs exploited their power by demanding loans, levying extraordinary taxes, and allowing interlopers to enter the EIC's market. The monarchy's power was greatly limited after 1700 however. After that parliament had powers to regulate the EIC and its charter became well defined in law. Thus there was a crucial change in the institutions surrounding the EIC, which mirrors broader arguments about how institutions changed in England around 1700.

The key premise of our paper is that changes in the monarchy represented a shock to quality of political governance when the monarch was unconstrained in the seventeenth century, but not later when it was constrained. In order to test how responses to monarch changes differed across institutional environments we focus on ships trading in the service of the EIC. We examine ship-level decisions to sail or exit the trade depending on whether a ship returned to England around the time of a change in the monarchy. Our first main result is that before 1700 ships were significantly more likely to exit when exposed to monarch changes. But after 1700 ship exit decisions were largely unaffected by exposure to monarch changes. These results suggests that in the period when the monarchy was unconstrained, shipowners behaved as though changes in the monarch were a negative shock to expectations about future profits.

Our second main result is that before 1700 the probability of ship exit differed across monarchs, but after 1700 the probability of exit differed little across monarchs. This finding suggests that shipowners behaved as though changes in the monarchy represented a fundamental change in the quality of political governance.

Our third main result is that after 1700 shipowners delayed their departures to Asia when the monarchy changed, but this did not apply to the period before 1700. These results are consistent with a model where shipowners after 1700 did not have strong negative expectations how monarch changes affected their profits, but they were not sure about the governance quality of the incoming monarch. Hence they delayed until they learned more. By contrast shipowners before 1700 behaved as though they had strong negative expectations about how monarch changes affected their profits and hence the option of waiting to learn more was less valuable.

The main implications of our results concerns the effects of the monarchy and institutional change on England's development. Through a detailed study of the EIC, we provide new evidence that the investments of firms directly dependent on the monarchy for their rights were hindered by shocks to political governance. Such micro-level evidence is important because the alternative view is that monarchs and political institutions had little effect on decisions crucial to economic growth and the industrial revolution. This paper also contributes to a vast literature focusing on the EIC, its trade, and larger effects on the global economy. Our study adds to the literature by augmenting data on shipping.

The paper offers lessons beyond the EIC. It is novel in analyzing the same investment activity surrounding a company for over 200 years. It shows the relevance of policy risk and uncertainty over the long-run, especially for companies involved in prominent partnerships with government. For economic history, this paper illustrates a different approach to studying policy risks. It treats policy risks as constantly evolving and sometimes uncertain due to changing governments and political circumstances. Studying how corporations and other actors responded to political shocks and government changes can reveal more about the dynamics of growth in many historical contexts.

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