The Affects of Warfare Upon Trade: Economic Growth in a War-Torn World, Northern Europe 1000-1700

by

Vincent John Kindfuller

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Abstract

Theories abound to describe how and why Europe was able to become the economic hegemon of the world between the 18th and 20th centuries. One of these theories is the competition argument, which argues that competition between the fractured states of Europe created the impetus for technological and institutional innovation which pushed Europe ahead of other areas of the world. However, these theories don't account for the negative effects that wars cause directly, which should detract from Europe's ability to stay competitive economically.

In this thesis, I detail a theoretical model through which warfare in Europe increased trade, even though individual wars caused devastation and disruptions in trade. By requiring rulers to raise new revenue streams, warfare forced them to bargain for new resources. This bargaining granted concessions to cities and merchants, in the form of city charters and monopolies, which encouraged trade and therefore increased the economic well-being of the affected states. I focus on Northern Europe between 1000 and 1500, though I use examples from other times and places as well.

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Contents

Chapter 1

Introduction

"In respect to number of subjects, extent of territory, and amount of revenue, he surpasses every sovereign that has heretofore been or that now is in the world.[1]" Thus, the traveller Marco Polo described the Kublai Khan, the Emperor of China, after returning from his journey to China in 1295. When Marco Polo visited the lands of the Far East, he was stunned by the reams of silk, rooms full of precious stones, pearls and gold and silver, and the grand cities he saw. A little over a hundred years later, the famous Chinese admiral Zheng He led seven massive fleets, each of dozens of ships and as many as thirty-thousand sailors, all around East Asia and even as far as the Arabian peninsula between 1405 and 1433.[2] Well before Columbus "sailed the ocean blue" with three ships and ninety sailors, Chinese fleets were travelling equal distances with massive fleets, forcing local kingdoms and cities to pay tribute to the Emperor of China.

Yet four hundred years later, the tables had turned. Rather than Chinese fleets enforcing humiliating treaties on their inferiors, European fleets could enforce humiliating treaties on China.

In 1839, the emperor's imperial commissioner at Canton, Lin Zexu, de-

[1]Marco Polo, *The Travels of Marco Polo*, William Marsden, ed., J.M. Dent & Sons, 1918, p. 152

[2]Lincoln Paine *The Sea and Civilization: A Maritime History of the World*, Atlantic Books, 2013, p. 374. These fleets certainly reached Arabian ports such as Hormuz and Aden, and some historians believe that they reached Australia as well. Although there has been speculation that they even reached the Americas, that is unlikely, to be generous.

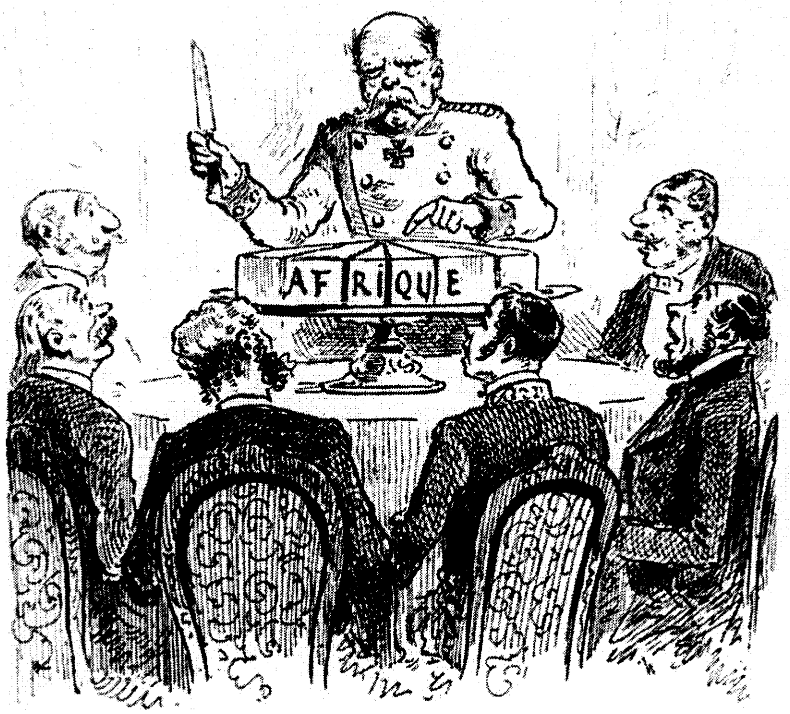

Figure 1-1: Political cartoon showing the European powers carving up Africa at the Berlin conference in 1885

> stroyed about twenty-one thousand chests of opium. In response, the East India Company dispatched a force of four thousand soldiers and sixteen ships to demand satisfaction....there was little anyone could do in the face of Britain's technological advantage. The Treaty of Nanking forced China to pay twenty-one million dollars in restitution, opened the "treaty ports" of Canton, Amoy, Fuzhou, Ningbo and Shanghai to British traders, abolished the canton system, and allowed the British to trade wherever they wanted and to occupy Hong Kong.[3]

Somehow, over the course of 500 years, the backwards and war-ridden kingdoms of Europe were able to advance far beyond any other part of the world, and essentially carve up the world for themselves. The saga of European economic growth from 1000-1500 and beyond brings about three major questions. The first is this: how and

[3]Lincoln Paine *The Sea and Civilization: A Maritime History of the World*, Atlantic Books, 2013, p. 523

why did some parts of Europe end up leading trade both in Europe and beyond? This then leads to a second question: how, despite the large number of wars taking place throughout the medieval period and later in Europe, did economic growth increase nonetheless? From here, we get to a third question: how did war and all of its included complications and requirements affect trade during that crucial period of European development?

1.1 Theoretical Models for Divergence

The question of how and why Europe became the dominant hegemonic power of the world, militarily, economically, and, at least to some extent culturally, has been a major concern of historians since it became apparent that it was true. A huge amount of time and effort has gone into the question of why Europe inherited the world, and how European nations managed to achieve the power and position of hegemony.

The major threads of argument each essentially take a position on two axes: how long ago the divergence happened, and to what extent the divergence was due to societal differences vice differences in geography or other natural affect.

Ken Pomeranz, who gave the discussion a name in his book *The Great Divergence* argues that divergence was very, very much a short process, only starting in the 1600 or 1700s. He also claimed that the divergence did not occur due to cultural or societal differences, but rather because of the happenstance that 1), Europe was able to discover the Americas at exactly the point in which they needed additional resources to support themselves and 2), they discovered coal in England precisely when that became necessary as well.[4]

Ian Morris also discounts the cultural argument, but he claims that the divergence was very much long term, caused by differences in geography between Europe and other parts of the world that were not as fortunate. He argues that the development of east and west were very similar, with trajectories that hit the ceiling of agricultural development at various times, and that the European continent was geographically

[4]Ken Pomeranz, *The Great Divergence*, Princeton University Press, 2000

fortunate because, first the Mediterranean created a central system of trade and communication in Europe, then the position of Europe on the Atlantic produced an easier method to get to the Americas, and then finally, there was easily accessible coal. Essentially, he argues that there wasn't anything special about European civilization, but due to a geographical accident, Europe was always going to be the continent that first experienced an economic and industrial revolution.[5]

Deirdre McCloskey claims that the industrial revolution came about as a result of the technical and institutional ideas generated by a bourgeois which became influential in Europe - England in particular - in the 18th and 19th centuries. This became possible because society accepted the "Bourgeois Virtues" as having equal, or at least similar, value to Christian values. Thus, McCloskey posits a short-term cultural argument - that is, the divergence is of only a relatively short time ago, but it does come from cultural differences, not geographical or natural ones.[6]

Phillip Hoffman, Charles Tilly and others express the belief that competition between states within Europe forced innovation which gave Europe an overwhelming advantage. Hoffman talks about technological and military innovation caused by military conflicts, showing how wars and the varying political costs to raise resources for them encouraged technological innovation. He explains how in India, Russia, the Ottoman Empire and China, circumstances were different enough to detract from military innovation, either due to different competitors, less competition, or higher political costs to raise resources.[7] Tilly, in a different vein, focuses on political institutions, showing how the needs of states to raise resources for warfare caused states to create and improve institutions, either expanding in a coercion or capital intensive path. The military competition Hoffman talks about shows itself in a different form in Tilly's argument, but nonetheless still causes innovations, though institutional, not military.[8]

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[5]Ian Morris, *Why the West Rules - For Now: The Patterns of History, and What They Reveal About the Future, Farrar Straus and Giroux, 2010*

[6]Deirdre McCloskey, *The Bourgeois Virtues: Ethics for an Age of Commerce*, University of Chicago Press, 2006

[7]Philip Hoffman, *Why did Europe Conquer the World?*, Princeton University Press, 2015

[8]Charles Tilly, *Coercion, Capital and European States*, Blackwell Publishers, 1990

1.2 The Problem of War

Although the argument for competition as a deciding factor is persuasive, it immediately begs the question: how can war-torn states be economically competitive, even with the tech advantages accrued from competition? The competition argument leaves out the effect of the competition on economic growth. Unlike the theories of Pomeranz and McCloskey, Tilly and Hoffman only discuss trade and the economy as incidental to the structures they claim were more important to establishing Europe as predominant: political institutions, for Tilly, and military technology, for Hoffman. There is an implicit, and occasionally explicit, assumption that Europe being more innovative in those areas caused the economic growth that followed.

Yet this brings to light a difficult problem for the competition based models: War is devastating. Wars are massively disruptive, killing people, ruining the countryside and generally hurting the areas they take place in. As Professor K.N. Chaudhuri explains in his description of the economy in the Indian Ocean,

> The stereotype image of the ploughman carrying on with his labours within sight of battlefields is a common one. In reality, wars inflicted terrible suffering on farmers and the inhabitants of towns. That merchants were seldom gainers by wars was a truth evident to all but the army contractors. [9]

Yet the proponents of the competition argument profess their belief that not only did the wars that ripped through Europe not overly harm Europe's economic state, they actually *caused* economic growth through the military and institutional benefits they granted. According to a list made by Evan Luard, between 1400 and 1559, there were 229 wars, an average of 1.4 wars a year. The major powers (The Holy Roman Empire, France, Poland-Lithuania, Venice, England and the Ottomans) were each engaged in wars for 45-80% of the time.[10] Similarly, from 1560 to 1648, there were 112 wars, or 1.25 per year, over half involving religious disputes. Although no similar

[9]K.N.Chaudhuri, *Trade and Civilisation in the Indian Ocean: An Economic History from the Rise of Islam to 1750*, Cambridge University Press, 1985, 33.

[10]Evan Luard, *War in International Society*, Yale University Press, 1986, 24-34. Interestingly,

study exists for the period of 1000-1400, the numbers are certainly comparable, if not higher, considering the decline in number of wars from 1400 to 1648, even with the religious dimension. In addition, adding in minor conflicts between nobles within countries would increase the number of wars even further.

Yet despite this prevalence of wars, European economies still prospered and traders from Spain, England, and the Netherlands expanded across the globe. Was Europe somehow immune to the negative effects of wars? Did wars in Europe have a uniquely limited nature, compared to those in India or China? That might explain the divergence in some manner, though it would just push the "why" question back one further step. However, there is no evidence that this is true. Jean Froissart, in his *Chronicles* written between 1370 and 1410, describes the predations of the English army in Normandy in 1346 during the campaign leading up to the Battle of Crecy:

> After capturing and plundering Barfleur, though without burning it, they spread out over the country...they did whatever they pleased, for no one resisted them. They came in time to a large wealthy town and port called Cherbourg. They sacked and burnt part of it, but found the citadel too strongly defended to be taken, so they went on towards Montbourg and Valogne. This last they sacked completely and then set fire to it. They did the same to a number of other towns in the region, taking so much valuable booty that it would have been an impossible task to count. So was the good, fat land of Normandy ravaged and burn, plundered and pillaged by the English. [11]

If wars adversely affected the population and cities of Europe as badly as elsewhere, than there must have been some sort of countervailing factor that kept those wars from irreparably damaging Europe's ability compete economically with other parts of the world. One possible explanation is that states preparations for wars

the major powers were engaged in civil wars or revolts around 25% of the time (a number which is included in the percentages above), indicating that rulers had almost as much to fear from their own people as from foreign powers.

[11] Jean Froissart, *Chronicles*, from *Readings in Medieval History*, Patrick Geary ed., Broadview Press, 1989, p. 731

affect trade in a similar way that Hoffman and Tilly propose they affect military technology and political institutions. State power and market power are inextricably mixed, in tension and dialogue all the time. Even when both states and markets were fairly weak, they were still constantly interacting with each other. Since war was the primary activity of states in the medieval period, then war affected trade through the state, as well as directly.

Thus, I propose to investigate how the states' response to warfare affected trade. I propose that states, which needed to raise vast sums of money to prepare for and conduct wars, granted privileges to cities and merchants in return for lump sums. I will primarily focus on Northern Europe between 1000 and 1500, in order to free the thesis from a number of complicating factors. The year 1000 was around the time that the costs of warfare outpaced the profits available from pillage and plunder, so rulers were forced to raise money to pay for their armies, not merely promises of plunder from successful campaigns. On the other end of the period, once we get past 1500 the Atlantic Trade became significant, a complicating factor which would be impossible to extricate from everything else.

I decided to focus on the North Sea and Baltic area, since they were more nearly free of the complications involved with religious wars than the Mediterranean, and were generally more focused on local trade than distance trade like the Italian city-states. Also the fact that England is included in this area encourages the use of English-language sources, which are naturally more prevalent in discussing the history of England. However, I will draw from other time-periods and locations as well, when it seems useful.

I contend that the granting of privileges which can be seen in my period and area represents a mechanism by which warfare encourages trade, and one which can be extended to later periods as well. In Northern Europe between 1000 and 1500, while individual wars caused devastation and specific disruptions to trade, the needs of states for resources for warfare cemented institutionalized privileges for merchants and cities, stimulating economic growth.

Chapter 2

Background

The late medieval period saw huge changes in society and technology throughout Europe. Many people consider the time between 800 and 1000 the low point of European civilization. During this time, viking raids accelerated in England, Ireland, the north coasts of Frain, Spain and Germany, and throughout the Baltic. They took gold, priceless artifacts and slaves.

In 846,

> According to their custom the Northmen plundered eastern and western Frisia and burned down the town of Dordrecht, with two other villages, before the eyes of Lothair [The Emperor], who was then in the castle of Nimwegen, but could not punish the crime. The Northmen, with their boast filled with immense booty, including both men and goods, returned to their own country.[1]

The high-water mark of the Muslim conquest of Spain occured in the 800s, seeing Muslim rule over almost the entire Iberian peninusal.[2] Meanwhile, in the East, the

[1] James Harvey Robinson, ed., Annals of the Abbey of Xanten, Readings in European History: Vol. I: (Boston:: Ginn and co., 1904), 158-161, Reprinted in Leon Bernard and Theodore B. Hodges, eds. Readings in European History, (New York: Macmillan, 1958), 95-96.

[2] Charles Martel's victory over the Muslim invaders of France at the battle of Poitiers in 732, the army he defeated was actually more a raiding party than an invading force. And, in fact, the Muslim kingdoms of Spain continued to take more territory for the next hundred years, though the pace of their conquest had been stymied during the 720s and 30s.

Byzantine Empire seemed weaker than it had for centuries, with internecine warfare and intrigue convulsing the realm.

Yet, two hundred years later, Europe began an upward trend which hasn't ended yet. Populations began increasing as improved farming techniques spread and the fertile lands of Northern Europe could be cultivated.[3] Some scholars argue that because everyone survived past the millennium everything began to look up.

The years around 1500 marks another watershed moment in European history. Christopher Columbus's voyage from Andulusia in 1492, although not the first of the exploratory voyages, was perhaps the most symbolically important. It marks the beginning of a time when Europeans began to circle the globe looking for new territories to conquer and exploit. In the same year, 1492, the Emirate of Grenada signed a treaty of surrender, finally surrendering the last vestiges of the Muslim kingdoms in Spain.

Economically, Europe was booming, as

> if we focus on per capital production (more output per worker), wages and new technologies, the fifteenth century abounds with signs of development and prosperityEuropeans by the 1490s were ready to begin their great migrations across the globe.[4]

The history of the intervening five centuries is rich and complex. However complex the picture of Europe is during this time, there are however common threads that are important background to any discussion of the period.

2.1 Economy

From the end of the Roman Empire to the re-formation of large kingdoms and empires in the second millennium, Europe was an essentially agrarian society. As Henri Pirenne wrote,

[3] Lynn White, *Medieval Technology & Social Change*, Oxford University Press, 1962

[4] Steven Epstein, *An Economic and Social History of Later Medieval Europe, 1000-1500*, Cambridge University press, 2009, p. 275

> just as the Carolingian Empire was an inland State without foreign markets, so also was it an essentially agricultural State. The traces of commerce which were sill to be found there were negligible. There was no other property than landed property, and no other work than rural work[5]

Although more recent scholarship has disputed the absolute nature of Pirennes claims, there can be no doubt that around 800 Northern Europe was essentially a subsistence and agricultural based economy, with little local trade and very little long-distance trade to speak of.

However, local trade began to pick up in the 800s, as "in ninth-century Burgundy annual fairs were held in the regions five civitates, in the chief towns of the county and in the vicinity of the principal abbeys.[6]" We find that "the expansion of trade in medieval Europe ... was ... the ... dovetailing of an economy of pillage, gift and largess into a framework of monetary circulation.[7]"

At the same time, as Vikings raided all across the Baltic, they also traded too. Vikings created the city of Dublin in Ireland to have a place to store their longships over the winter if they didn't return home to Scandinavia, and they also traded in Dublin. Likewise, Vikings traded in London and the Netherlands, essentially making the decision every time they made port whether it would be more profitable to raid or to trade.

Throughout the period, the Italian city-states were the primary drivers of trade across Europe, although militarily they couldn't compete with the centralized states of France and the Holy Roman Empire. Merchants from Venice, Genoa and Florence, as well as smaller ones such as Pavia and Siena, travelled all across the continent, bringing grain and coin back to their home cities in return for a variety of goods, including spices and other exotic goods brought through the silk road from Asia.

As the centuries rolled on, trade networks spread throughout Europe. In Byzantium, the Varagnian Guard was composed of men from the Norse countries who had

[5]Henri Pirenne, *Medieval Cities: Their Origins and the Revival of Trade*, trans. Frank Halsey, Princeton University Press, 1925 26

[6]Georges Duby, *The Early Growth of the European Economy*, Cornell University Press, 1978, p. 104

[7]Ibid

travelled all the way to Constantinople to serve in the Emperor's guard. The Mediterranean remained a center for trade, as Italian merchants carried cargo both within the Mediterranean and to Northern Europe. In the North, meanwhile, the textile trade began to take off, and England and Flanders competed for domination of the wool trade.

By the 1500s, Northern European countries dominated trade in Europe, as the invasion of Northern Italy by the French broke the Italian city-states' strangle-hood on trade. The Hanseatic League had appeared in the late 1200s, and remained in control of trade in the Baltic, particularly the trade of bulk goods such as fish and grain, until the late 1500s. Around 1500, in addition, the Netherlands in England entered into a long struggle to control trade, which saw first the Dutch, and then finally the English win prominence in trade.

2.2 Religion

Of course, any discussion of Europe during the middle ages is incomplete without a discussion of religion. By 1000, the main part of Europe was solidly Christian, and the schism between Roman Catholic and Eastern Orthodox churches had not yet occurred. The pagan religions of northern Europe held out in Scandinavia and the Baltic, but the Scandinavian kingdoms of Denmark, Norway and Sweden had become, at least nominally, Christian by 1164. The Baltic states remained pagan for another few hundred years.

Medieval Christianity was generally not very supportive of trade and merchants. The social order of the middle ages recognized three classes - those who prayed, those who worked and those who fought. The merchant class, those who traveled, were not included in this vision of medieval society. Thus separated from the social order, merchants occupied an odd place in society, neither fish nor fowl. However, this also had its advantages, as it meant that they were not bound to the land as peasants were.

Christianity prohibited usury, which was a prohibition with great impact on economic life in the Middle Ages. Although today usury only applies to unreasonably high rates of interest, during the middle ages, usury was used to refer to any amount of interest at all. Without the ability to levy interest, lending was an uneconomical activity. Those who needed to borrow money had to find ways to give additional money in lieu of interest, such as money changing fees or convenience fees, or, in the case of states, economic or political favors. Alternatively, they could borrow money from the Jews, who were not included in Christianity's prohibition on usury.

2.3 Feudalism

The system of feudalism varied hugely between areas of Europe and time periods, but the basic features of the traditional feudal system were present essentially everywhere. Traditional feudalism gave monarchs power through the granting of fiefs of land to their most important subjects, the high nobility or barons. Apart from a large amount of land held directly by the king, his personal *demesne*, the lands of the kingdom were held by these barons, his tenants-in-chief, and the king had no direct ability to interfere in them.

In return for the grant of his lands, the barons swore to bear their swords against the kings enemies and have their own knights (granted land the same way by the barons at a smaller scale) ride with them. Over time, this system evolved to create several layers of lords, with each owing loyalty to the lord above him and owed loyalty by those below them.

Below these were "those who work," the peasants. In return for the protection of the lords and knights, the peasants would work the land and give some part of their product to the lords above them. "Those who prayed," the priesthood, would meanwhile attend to the immortal souls of both peasants and nobles.

Just as in the Christian conception of the world, merchants really didn't have a place in the feudal social order. They were something out of the ordinary, necessary for nobles and priests to get the fine goods and luxuries they desired, but not easily fitted into the strict social hierarchy.

Of course, the situation in Northern Italy was quite different, where the aristocracy of the city-states was made up primarily of successful merchants. There, the trade-based economy of the Roman Empire never quite vanished, and merchants never were pushed outside of the bounds of the societal order the way they were in the rest of Europe. However, even in Italy the feudal system remained in place, with only the difference that some of the nobility led trading concerns from their towers in Italian cities, rather than peasants in the fields from their manors.

Finally, before we get into the historical model, we must consider the concept of "states" and the other governmental entities in the period. This is inherently very difficult, both because these state-like entities varied so much in time and space, and because they don't look anything like the nation-states that exist today. Kings didn't have absolute power over their dominions, and had to deal with the demands and competition of powerful nobles and others in their realm.

Although in England the Magna Carta did not prevent the king from exercising effective control over most of his kingdom most of the time, the Holy Roman Empire showed an entirely different trajectory, with the powerful Electors becoming essentially independent rulers in their own rights, only nominally beholden to the Emperor of the Holy Roman Empire.

Finally it's important to remember the absence of bureaucratic systems in the running of the states of the time.

> This remained an age of personal rule. Such was the nature of the small world of royal government - based on informal mechanisms of brokerage and clientage, rather than numerous civil servants running a well-oiled machine - that government did not simply run itself. [8]

With the government run on personal lines, the power of the monarch was directly linked to his personal qualities - his charisma, industry, and self-assurance. Great nobles could take advantage of weak kings, even as strong kings could curtail the power of the great nobles.

[8] Graeme Small, *Late Medieval France*, Palgrave Macmillan, 2009 p. 134

Although different types of states, both in size and type of governance, existed all across Europe, the problems they faced in dealing with one another were essentially the same. In other words, it was a period of shifting alliances and constant efforts by everyone to gain an advantage over one another. War was commonplace, as these nascent states, city-states and principalities attempted to find their place in a chaotic world.

Chapter 3

Theoretical Model

The intent of this thesis is to explain long-term economic developments, in particular the kind of growth associated with increasing trade among European entities, despite the broader context of frequent state warfare. Given that wars are devastating and cause great harm both to individuals and to societies, how is it possible that one of the most war-torn parts of the world became the world's economic hegemon? The theoretical model I propose here seeks to explain one important subset of the larger historical question.

Rather than trying to account for the different trajectories of Europe and East Asia or propose a theory that ties together the entire world, the goal here is to propose one plausible mechanism by which warfare can encourage economic growth. This will offer, at the least, a useful theoretical addition to the discussion, even if it does not fully answer all of the questions associated with the Great Divergence.

Phillip Hoffman writes that the European states were engaged in a very particular form of military competition. Due to their skewed incentives, rulers would generally be incentivized to make the decision to go to war.

> The leaders making decisions about war - early modern Europe's kings and princes - stood to win a disproportionate share of the spoils from victory but avoided a full share of the costs. They - not their subjects - were the ones who basked in glory or who burnished their military reputations

when their armies were victorious. But they bore few of the costs, which fell disproportionately on their subjects.[1]

In addition, even if the war went poorly, little harm would fall upon them, as "although they might lose small amounts of territory, they faced little chance of losing their thrones.[2]" The largest risk they faced from waging war was dying in battle, but falling gloriously in battle was far from an unthinkable risk, or even a particularly costly one.

Thus, when faced with a decision between declaring war and not declaring war, rulers would see little harm in choosing war. In this competitive "tournament" model of European competition, rulers were willing to spend vast amounts of resources - cash, men and materiel - in the pursuit of glory and territory. Phillip Hoffman argues that the expenditure of these resources on the military created the incentives for the technological innovation that allowed Europe to outpace other parts of the world. I argue that the very act of *raising* the resources through charter granting created additional incentives for increased trade.

Before proceeding further, it is critical to make the important distinction between wars per se and warfare more generally. I define wars as single, concrete conflicts between two or more actors, such as *the* War of the Roses, or *the* War of Spanish Succession. By contrast, I define warfare as the combined total of multiple individual wars and most importantly the preparations made in anticipation of war, even in cases where actual conflict might not transpire or takes a long time to finally occur. Essentially, although European countries were in states of war somewhere between 40% and 80% of the time, they were in a state of *warfare* constantly. Thus, I claim that while individual wars in Europe in the 11th to 16th century caused devastation, the ongoing need for states to raise resources, cash in particular, for actual or anticipated wars - warfare - promoted economic growth. The basic model is as follows:

1. Over time, the constant (and increasing) need to prepare for warfare caused an increase in the resources needed by governments to pay for military necessities,

[1]Phillip Hoffman, *Why Did Europe Conquer the World?*, Princeton University Press, 2015, p. 26
[2]Ibid

such as soldiers, armaments and ships, beyond what the governments were able to generate by their existing revenue streams.

2. One of the primary methods that governments used to raise resources to meet these needs was to grant cities and merchant associations concessions and privileges

3. Granting privileges to cities and merchants offered them stability and security as well as economic incentives for increased trade

4. Increased trade and commerce led to economic growth

I'll explain each of these arguments in turn here in a general sense, and then in the following chapters will examine each in more detail.

3.1 Increasing Demands

Engaging in warfare requires more resources than were available to rulers through their pre-existing revenue streams. These resources ranged from manpower (i.e., feudal levies or mercenaries) to arms, armor and horses, to logistics and supplies. All of these resources could be, and increasingly were paid for with cold hard cash. Before our period, rulers, including such famous leaders as Julius Caesar and Charlemagne, could subsist off the profits of individual wars, using loot and spoils to pay for their campaigns, often making a profit while doing so. However, as waging war became more expensive starting in the first half of the second millennium, states required more resources to wage warfare than they could possibly acquire from the spoils of war itself.

As warfare changed from feudal levies to professional armies (standing or mercenary), from hired merchantmen to professional navies, and from pillage and "living off the land" to professional logistics, the costs of being prepared for war rose. These increasing expenses continually outpaced the increase in rulers' revenue streams, and therefore kings and princes were forced to scramble to find new ways to raise money.

3.2 Raising Resources

Although rulers could find many ways to raise resources, one of the most attractive of these ways was to give privileges to wealthy individuals or institutions, in exchange for lump sums of money. Rulers would grant privileges rather than raise direct taxes or borrow money from lenders due to the lower political costs associated with granting privileges. Essentially, political costs are the prospect of angering powerful political figures within a state - powerful nobles, mainly, but rulers also had to worry about lenders refusing to continue lending and peasant rebellions as well. For rulers political costs were paramount, as, although the physical costs didn't fall upon them but on their subjects, political costs directly affected their ability to carry out their goals. A ruler who failed to keep his powerful subjects happy could find his power constricted, as King John and his son Henry III discovered in England when they were forced by the barons to sign the Magna Carta in the early 1200s.

When a government found itself without the means to pay for its resource needs, it could do one of three things: increase its means, decrease its needs, or borrow on future means to meet current needs. As explained above, rulers in a competitive situation like Europe were incentivized to continue waging war despite its costs, so they were unlikely to stop preparing for warfare in order to decrease needs. Increasing the means of a government would consist of raising new, long-term obligations from their subjects. These could include both direct taxes and indirect taxes such as duties and tariffs. However, raising obligations would carry with them high political costs, so could not always be attempted.

Finally, rulers could borrow money to pay for their wars. As rulers' needs increased, so too did a structure of wealthy merchants and lenders who were willing to lend them money. Lenders were able to get around the church's prohibition of usury by various means, including using "convenience costs" and money changing fees in lieu of interest, or by having only Jews, on whom the prohibition did not fall, lend money. However, even borrowing money came at a cost. Due to the imbalance of power between rulers and those who would lend to them, rulers could and often defaulted on debts. To counter those risks, merchants often instituted punishing rates of interest or even refused to lend to the rulers entirely. In addition, when powerful nobles became aware that the king was in debt, this knowledge could encourage them to exert their power within the kingdom.

Fortunately for rulers in such straits, they also had the option to grant concessions to wealthy individuals or organizations, such as merchants or cities. In return for large lump sums, rulers could grant new charters with special privileges to cities. These privileges could include exemptions from tax or monopolies of certain commodities. Thus the ruler could raise money, and the act would come with a minimal political cost, as it didn't negatively affect the rights of powerful nobles who could be offended.

3.3 Merchant Charters

Charters granted to merchants encouraged trade by drawing commercial interests to cities with lower taxes or other privileges. These privileges created a more favorable trading environment, and therefore attracted new trade. There are several types of concessions that kings could grant to trading groups or cities, all of which had different effects but nonetheless affected trade positively.

Rulers often granted cities and merchant groups temporary or permanent exemptions from taxes or tariffs. This lowered tax or tariff increased the profit margins for merchants who are considering trading in the city. These increased profit margins would increase the likelihood that merchants would trade there, and therefore would increase trade.

Another privilege that rulers could grant cities would be permission for them to form merchant association between cities and among merchants. These associations, such as the Hanseatic League of cities or merchant guilds for individual traders, allowed merchants from foreign countries to be surer of their safety and security when trading between cities. This decreased risk therefore increased trade as well.

Cities and merchants were also sometimes granted monopolies over trade in certain goods. These monopolies certainly increased the wealth of individual cities or merchants, as it allowed them to take the lion's share of trade. Some historians argue that monopolies discouraged other traders from opening operations, which could be a harm to economic growth. However, despite this uncertainty, I contend that the overall trend was to increase trade, as these privileges granted merchants the confidence to continue operations, accumulate wealth and conduct more trade.

In all of these ways, merchant charters encouraged trade in the countries they were granted in. Even though rulers who granted city charters did not do so out of this intention, it nonetheless was the effect of the privileges they granted.

3.4 Economic Growth

Finally, increased trade encouraged economic growth. In 1664, Thomas Mun wrote "the ordinary means therefore to encrease our wealth and treasure is by Forraign Trade.[3]" Trade created a number of advantages for states, some of which were reflected among the people, and others of which were only beneficial to rulers, particularly in a mercantilist society. Firstly, trade creates economic benefit for the average person. In his research on how intercontinental trade affected economic growth, Nuno Palma found that "engaging in overseas trade allowed the mother economies in Europe to maintain real wages at levels which would not have been otherwise possible.[4]"

Secondly, and probably more importantly for the purposes of this thesis, international trade facilitated the accumulation of large amounts of capital which encouraged further development. In addition, increased trade also allowed the creation of a steady revenue stream for rulers in the form of tariffs, which had a lower political cost than direct taxes and could greatly supplement a ruler's income. Although the mercantilist perspective of tariffs and restricting trade is alien to modern perspectives on free trade, its contribution to the power of rulers certainly played to Europe's advantages in competition with foreign powers. The combination of these two effects granted

[3]Thomas Mun, *England's Treasure by Forraign Trade*, 1664, reprinted by MacMillan New York, 1895. p. 7

[4]Nuno Palma, "Sailing Away from Malthus: Intercontinental Trade and European Economic Growth, 1500-1800". *Cliometrica*, 2016, p. 131

European nations an advantage in economic growth which outweighed the negative effects of war and therefore preserves the competition model as an explanation for Europe's success.

Chapter 4

Resource Needs

4.1 Increasing Costs

Warfare was a resource intensive process which required vast amounts of money and men. As costs increased over time, rulers continually scrambled to raise money to pay for warfare as the costs outpaced their revenue streams. Even in the beginning of the period we are examining, expenses outran revenue. Horses and armor alone were massively expensive. In 761, a man named Isanhard sold all of his ancestral lands, as well as a slave, for a horse and a sword[1]. Although feudalism prevented rulers from having to pay for the arms and mounts of their entire armies, they still needed to raise their own retinue, and it always had to be larger and more expensive than those of other nobles, lest the other nobles get ideas unworthy to their station.

Over the several hundred years from 1000 to 1500, the costs of war increased, as the military system of Europe switched from feudal levies to mercenaries and eventually standing armies. Charles Tilly describes the change as a change from "patrimonialism," where "tribes, feudal levies, urban militias and similar customary forces played the major part in warfare," to "brokerage," when "mercenary forces recruited by contractors predominated in military activity.[2]"

In England, historians have termed the intermediary stage between full patrimoni-

[1] Lynn White, *Medieval Technology & Social Change*, Oxford University Press, 1962, p. 29

[2] Charles Tilly, *Coercion, Capital and European States: AD 990-1992*, Blackwell Publishers, 1990, p. 29

alism and full brokerage "bastard feudalism." Where bastard feudalism arose, rulers allowed their subjects to contribute money in lieu of levies, and used that money to outfit armies. This modified form of feudalism still did not become a full brokerage system, however, in that, first, the dues were still customary rather than contractual, and second, personal retainers rather than outright mercenaries made up a large portion of the raised troops. Nonetheless, the beginnings bastard feudalism signals that costs had increased and rulers were unwilling or unable to require contributions of men from their vassals.

In England in the late 1200s, "feudal military service last made a significant contribution to the wars of Edward I. He contented himself with ... 375 knights for the 7,000 due, extracted scutage [fines in lieu of service] from the rest, and raised other troops by other means.[3]" However, even with scutage replacing levies for the customary dues, the king could not raise enough money to pay for his wars, and had to resort to borrowing. Edward I's problem "was that the flow of his revenues and taxes was uneven and often delayed, whereas the expenses of his ambitious foreign policy were immediate and urgent." He was therefore forced to borrow heavily from Italian bankers of the Riccardi family to make up the difference.[4]

Ransoms, paid for the safe return of rulers and powerful nobles who were captured in battle, were another prohibitive cost. England received the huge sum of over £250,000 for the safe return of King John II of France in the 1360s.[5] Trying to pull this amount of money out of an already impoverished state treasury required massive new revenue streams, including new taxes and bargains struck with cities and nobles.[6]

Other states also had to raise vast sums of money to spend on their military to be able to compete, as feudalism gave way to "brokerage". As Tilly, explains, "the increasing scale of war and the knitting together of the European state system through commercial, military, and diplomatic interaction eventually gave the war-making ad-

[3]Michael Hicks, *Bastard Feudalism*, Longman Group, 1995, p. 21

[4]Edwin Hunt and James Murray, *A History of Business in Medieval Europe, 1200-1550*, Cambridge University Press, 2006, p. 94

[5]M.M. Postan, "The Costs of the Hundred Years War", *Past and Present*, April 1964

[6]Desmond Seward, *The Hundred Years War*, Penguin Books, 1978, p. 104

vantage to those states that could field standing armies.[7]" As rulers transitioned from being merely the greatest lord in the land to being truly *monarchs*, with specific and unique duties, responsibilities and rights, the way they conducted war changed as well. No longer were wars between rulers merely conflicts between very powerful lords. Now they were wars between states, or at least the embryonic forms of states.

4.2 Insufficient Resources

With war costing as much as it did, rulers had to turn to means other than customary or personal incomes to pay for them, and they continued to be forced to find new places to get money from as military spending increased. In 1502, a veteran of the Italian wars named Robert de Balsac wrote that "most important of all, success in war depends on having enough money to provide whatever the enterprise needs.[8]" To remain competitive in the competitive tournament that was Europe, states needed to continually raise more money. Trying to raise this amount of money could bankrupt them.

> The statements which survive from the period of the Hundred Years' War demonstrate a very high level of expenditure, mainly on military matters, which is often considerably in excess of the total income declared...faced with dwindling revenue from taxation, the late Medieval English state could only keep afloat by mortgaging an increasingly large proportion of its future revenues.[9]

Although it's difficult to find numbers for expenditure from early in the medieval period, for times where we do have numbers available, between 60% and 90% of states' expenditure was consistently spent on defense.[10]

[7] Charles Tilly, *Coercion, Capital and European States: AD 990-1992*, Blackwell Publishers, 1990, p. 15

[8] Ibid, p. 84

[9] Richard Bonney, *The Rise of the Fiscal State in Europe c. 1200-1815*, Clarendon Press, 1999, p.34-35

[10] Phillip Hoffman, *Why Did Europe Conquer the World?*, Princeton University Press, 2015, p. 23 and Jari Eloranta, "Military Spending Patterns in History," EH.Net Encyclopedia, edited by Robert

With such huge resource needs, new sources of income had to be found. Medieval rulers thought in the short term. They cared little about long term consequences of their monetary policy, but cared deeply about their immediate need for cash to finance the latest looming conflict.

4.3 Peaceful Expenses

Certainly it can be objected that states had other expense other than war that conceivably could drive resource needs in the same manner as warfare.

For example, the building of giant cathedrals, or, more prosaically, the construction of roads and canals, could theoretically take up the budget of a ruler who didn't engage in warfare. If that was so, and warfare was not unique in increasing state resource needs and requiring new revenue streams, then the competitive tournament of Europe need not have produced unique effects. Or, to make the objection more precise, if Mughal India spent its money on building the Taj Mahal instead of raising troops for warfare, then it would still have similar needs for increased resources, and also be looking for new revenue streams.

However, put simply, the cost of peacetime enterprises such as building projects was dwarfed by the cost of warfare. During the middle ages, the estimated cost to build an average cathedral was under £100,000.[11] Comparatively, King John of France was ransomed for £250,00, not even including additional costs for actually waging his wars. The palace of Versailles "absorbed less than 2 percent of Louis XIV's tax revenues. Meanwhile, 40 to 80 percent of government budgets went directly to the military.[12]"

In contrast to the nascent states in Europe, in India there was no continual compe-

Whaples, September 16, 2005. URL: http://eh.net/encyclopedia/military-spending-patterns-in-history/. There are sometimes numbers for individual expenses or wars, such as Louis IX's crusade in the mid-13th century, which cost 1 million Livres, much of which was spent on ransoming Louis back after being captured. However, consistent accounts of total expenditure and total revenue are hard to come by until the 14th and 15th centuries.

[11] Anne McCants, "Medieval Economy," lecture notes, 2016

[12] Phillip Hoffman, *Why Did Europe Conquer the World?*, Princeton University Press, 2015, p. 21-22

tition, no continual "tournament," driving expenses always upward. As building the Taj Mahal took only about 0.5% of the Mughal states yearly revenue for seventeen years, even massive building projects couldn't take the place of military expenses in driving resource needs. In fact, even for a state such as India that conducted wars significantly less frequently than the European states, the vast majority of the governments revenue went to maintaining armies.[13] The military expenses there remained relatively static and did not require new revenue - or innovative means to produce new revenue - in order to meet the the demands of the military, significant though those needs were.

Along with being far more expensive, warfare created needs that were both a necessity to meet and uncertain in requirements. Warfare in Europe was certain, because all parties recognized that conflict was possible at all times and needed to be prepared. Unlike building costs, which could always be put off or postponed if there wasn't enough gold in the treasury, war costs were entirely un-negotiable to rulers of European countries. There would never be any option to not pay and let the treasury recover.

They were also far more uncertain than building costs, since they could vary immensely based on potential enemies, new technologies and other uncertainties. The modern example of the British Navy being forced to replace their entire capital ship fleet after the introduction of the *HMS Dreadnought* in 1906 made older capital ships obsolete offers a case where technological development renders expenses uncertain. Peacetime expenses, by contrast, were predictable in that a ruler could decide whether or not to incur them. Even if there was a cost-overrun in a building project, the ruler could merely decide to put off the expense for another year.

Demand for resources for warfare was determined by the circumstances, which were always changing. Demand for resources for building projects, on the other hand, was always determined by the ruler himself. Thus, peacetime expenditures could never drive resource needs, and therefore the creation of revenue streams, in

[13]Michael N. Pearson, "Merchants and States" in *The Political Economy of Merchant Empires: State Power and World Trade 1350-1750*, James D. Tracy ed., Cambridge University Press, 1991, p. 54

the same way expenditures for warfare could.

Chapter 5

Resource Acquisition

> It is fully condescended, determined, and decreed by the said Mayor, Aldermen, Sheriffs, Council and loving Commons of the same city of Bristol, that all the gates of the said city, from henceforth shall be free of all manner of tolls there to be demanded or taken, by the same Sheriffs or other officers, for the time being, of any person or persons, for any kind of merchandize, wares, or victuals...in recompence of the said tolls and customs, that the said Sheriffs should be rather gainers than losers, the which certificate hereafter followeth, the sum total of the 10 years amounting to 412. 3s. 4d.[1]

In this way in 1546, the city government of Bristol paid out the lump sum of 10 years estimated tolls and duties in return for freedom from those obligations. The agreement was to exempt them only for ten years, to be equal to the sum they payed. However, it appears that the exemption became enshrined in custom, and merchants in Bristol continued to be free from dues. Indeed, over two hundred years later, in 1775, "David Lewis, Merchant, said he exported goods, some his own property and others on commission; that when dues had been demanded, he had refused to pay them, conceiving that they could not legally be required; and that for three years

[1]Henry Bush, *Bristol Town Duties A Collection of Original and Interesting Documents [etc.]* (Bristol, 1828), *British History Online* http://www.british-history.ac.uk/no-series/bristol-duties [accessed 17 April 2016]. Interestingly, the city raised that money through the sale of church plate from the local clergy.

before that time they had ceased to demand them of him.[2]" Thus a temporary exemption became enshrined in customary law, and merchants continued to reap the benefit two hundred years later.

5.1 Methods of Raising Money

As explained in the previous chapter, rulers continually needed to raise new resources to pay the massive sums required to support their wars. Although rulers did not particularly care about the effects any measure for revenue raising would have on their subjects, but they always had to keep in mind the political costs which prevented them from drawing as much upon their realm as they would like. Their primary concern was always to find enough money to pay for wars without offending power forces in their kingdom sufficiently to push back. As Charles Tilly puts it, "war and preparation for war involved rulers in extracting the means of war from others who held the essential resources men, arms, supplies, or money to buy them and who were reluctant to surrender them without strong pressure or compensation.[3]"

In addition, those who possessed the resources that rulers needed had by that very fact the ability to resist demands from rulers.

> An earl had always with him a small army of 50, 80, 100 or 200 able-bodied men who conferred immunity from violent attack or robbery and whom he could focus at a particular time or place to influence a lawsuit or election, to pull down an enclosure or a house, or to strike at a specific enemy.[4]

Monarchs who overreached their limits, as did the Kings of Poland in the 1400s and the Holy Roman Emperors in the 13th and 14th centuries, could not only find their measures struck down, but find themselves further restricted in the future.

[2]Henry Bush, *Bristol Town Duties A Collection of Original and Interesting Documents [etc.]* (Bristol, 1828), *British History Online* http://www.british-history.ac.uk/no-series/bristol-duties [accessed 17 April 2016]

[3]Charles Tilly, *Coercion, Capital and European States: AD 990-1992*, Blackwell Publishers, 1990, p. 15

[4]Michael Hicks, *Bastard Feudalism*, Longman Group, 1995, p. 163

When King John I of England, tried to regain his lands in France in the early 1200s, he needed to raise large sums of money. He attempted to do so by raising high taxes on the barons of his realm, but they resisted, calling it a "tyrannous invasions of ancient right and custom.[5]" Not only did they resist, but they entered into open rebellion against the king. After his expensive failures in the war in France, John was in no position to call his unruly barons to heel. Instead, they forced him to sign the *Magna Carta*, or Great Charter, in 1215. This Great Charter greatly restricted the ability of the king to raise scutage or aid (two forms of taxes) without the consent of the barons.

> No scutage or aid shall be imposed in our kingdom unless by common counsel of our kingdom, except for ransoming our person, for making our eldest son a knight, and for once marrying our eldest daughter; and for these only a reasonable aid shall be levied and the city of London shall have all its ancient liberties and free custom as well land as by water.[6]

Although it was struck down by the Pope as too radical, John's son King Henry reisssued an altered version in 1216, and then another in 1217 and 1225. Eventually the charter became enshrined in the common law of England.

Charles I of England, likewise, found out about the political costs of raising taxes in the 1630s. He refused to call Parliament for over a decade, since he didn't want to bargain for the money he needed. He tried to use other means to raise money, such as the "ship-money" tax which didn't require the approval of Parliament but was also considered an unfair imposition. He found significant political opposition to his attempts to raise money through these means. Finally, when he found his existing revenue to small to prosecute a civil war in Scotland, he called Parliament in 1640 for the first time in eleven years. He dissolved this Parliament after only a few weeks, but still could not find enough funds, and was forced to call another in late 1640. This Parliament made signficant demands of the King, who found them to be

[5] J.C. Holt, *Magna Carta*, Cambridge University Press, 1992, p. 27

[6] "Magna Carta of 1215", from *Readings in Medieval History*, Patrick Geary ed., Broadview Press, 1989, p. 781

unsupportable to his *lese majeste*, and finally tried to arrest several members of the House of Commons, beginning the Civil War.[7]

The Frondes in France from 1648-1653 were a similar response to raising taxes. Although the King of France, and Cardinal Mazarin, the *de facto* ruler of France, defeated the rebellions, they nonetheless came about due to the same political concerns leading to the English Civil War, and followed a similar pattern.

Thus, in both of these cases the attempts of the ruler to raise funds without dealing with political opposition (from bodies which came about as a result of bargaining by previous rulers, incidentally), failed. Thus, the political costs of the attempts were too high.

Given this constant need to be worried about the political effect of any creation of a new revenue stream, rulers looked for the most politically expedient way to raise funds. Mark Dincecco of the University of Michigan explains the three basic ways to raise money, in order of political ease: borrowing, indirect taxation and direct taxation.

The way to raise money that was

> the least likely to spark internal turmoil was to borrow funds on domestic and international bond markets. Borrowing opportunities were limited, however, because the creditworthiness of rulers ultimately depended on their ability to collect sufficient tax amounts. Large ratios of debt to taxes were bound to negatively affect the ability of sovereigns to borrow new funds.[8]

As creditors saw that a ruler was taking on a large amount of debt, they were less likely to offer that ruler more money in the future. By the virtue of their position, rulers could still force creditors into offering money, or to accept repayments of previously owned sums for less money than previously agreed to. Such forced debt carries with it very different implications with respect to the relationship between rulers and the

[7] Samuel Gardiner, *History of the Great Civil War*, 1888, Reprinted by Phoenix Press in 2002

[8] Mark Dincecco, "Warfare, Taxation and Political Change: Evidence from the Italian Risorgimento", *Jounral of Economic History*, 2011, p. 890

merchants in their realm than freely offered loans. However, in many ways it is just another form of borrowing, simply one that with significantly higher political costs than borrowing from willing lenders would entail.

Rulers could also raise funds by increasing indirect taxes, such as "excise, customs, tolls, transaction charges, and other collections on transfers or movements.[9]" Resting primarily on merchants and peasants, not great nobles, these taxes were easier to implement, but also not as lucrative as direct taxes. In addition, they could stifle trade if over implemented, and greatly encouraged smuggling.

Finally, direct taxes, including head taxes and land taxes, would be the most lucrative and least financially risky, but the most politically difficult. As the holders of the most land in a country, and therefore the majority of the wealth, the great landholders who were most able to resist would be more personally affected by direct taxes. This meant that implementing direct taxes cost the most political capital, even though they would be otherwise the most attractive.

Due to the ability of powerful groups in a country to resist more fully than others, taxation almost never fell equally on all subjects of the realm. Monarchs granted special privileges and exemptions to merchants, and large landholders were also able to coerce exemptions or restrictions on taxation. In perhaps the most obvious example, in Poland the weakness of the line of succession in the mid-14th century, allowed the great landholders to receive blanket exemption from all new taxation as well as other privileges, leaving the king essentially powerless. In the case of France and Poland, and many other European countries, taxes were almost entirely avoided by the nobility. By its very nature of descending loyalties, feudalism created powerful forces just below the king. This, in many ways the core of the feudal system, greatly limited the ability of the king to raise the money he needed.

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[9]Charles Tilly, *Coercion, Capital and European States: AD 990-1992*, Blackwell Publishers, 1990, p. 87

5.2 Bargaining for Money

Thus, the ever present need for money, in combination with political costs associated with the simplest ways of doing so, caused rulers to resort to creative ways to raise money. Rulers consistently embarked on projects of warfare which overdrew their revenues, and were forced to beg and borrow to make up the difference. The rulers of Europe found that "the more expensive and demanding war became, the more they had to bargain for its wherewithal.[10]"

One such bargain, widely used by rulers in Northern Europe, was the offering of special privileges to cities or merchants in exchange for lump sums. For example, "long-distance merchants...obtained privileges - which could include legal permits to trade, safe-conducts, tax reductions, exclusive monopolies and other special favours - from rulers through whose territories they travelled.[11]"

In a sense, this is another form of borrowing, though one that doesn't require any stretch of credit. In fact, in some cases, the lump sums actually were, at least nominally, loans, although ones on incredibly favorable terms for the ruler, and which the merchants often did not expect to receive back in full. Instead, they received official support and privileges, which were generally more profitable for them anyway. Even when not officially loans, the granting of charters still took on the form of borrowing. The monarch "borrowed" money in the form of a lump payment, and "paid it back" by allowing a decrease in taxes owed or by granting special monopolies.

The biggest advantage to the ruler of this method for raising money was the low political cost. Granting charters offended no one - the powerful nobles were not affected by it, peasants certainly wouldn't rebel over it, and the church could not find any problem with it either. The only possible party who could dislike the notion would be rival cities, but unless a monarch favored one city far above another, the cost of this would be minimal.

In fact, cultivating the support of the cities could create countervailing forces to

[10]Charles Tilly, *Coercion, Capital and European States: AD 990-1992*, Blackwell Publishers, 1990, p. 188

[11]Sheilagh Ogilvie, *Institutions and European Trade: Merchant Guilds 1000-1800*, Cambridge University Press, 2011, p. 23

the great nobles, generating a political advantage to the monarchs. "The entry of the burghers upon the political scene has as a consequence the weakening of the contractual principle of the Feudal State to the advantage of the principle of the authority of the Monarchial State,[12]" as urban centers turned directly to the king instead of to their local lords.

The disadvantage, of course, was the future worth of lost revenue from the cities. Particularly when cities could continue to grow more prosperous, the lost revenue could be enormous. Since cities "exacted new franchises in return for the sums which they consented to loan..it was therefore impossible for [the ruler] to subject them arbitrarily to a poll-tax...however badly needed.[13]" However, most rulers didn't look far to the future - certainly not past their reign and rarely even into later parts of their reign. Considering that they *needed* the money *now*, rulers were quite willing to bargain away their future earnings for cash in the present. "Individual rulers were likely to discount the future more than guilds of merchants, so both parties could be made better off if rulers traded with merchants to get payments now even if it meant forfeiting revenues in future.[14]"

It is important to remember that there were very few, if any, enterprises which a ruler would or could spend their revenues on besides the military. As mentioned in the introduction, as much as 90% of states' revenue was spent annually on the military, at least in the major powers of Europe. In addition, given the uncertainty and variability of expenses for warfare, it was very difficult to forecast future needs, which meant that trying to balance the budget over the course of decades was never something that rulers would seriously contemplate.

Indeed, considering the uncertainty and cost-overruns associated with military

[12]Henri Pirenne, *Medieval Cities: Their Origins and the Revival of Trade*, trans. Frank Halsey, Princeton University Press, 1925, p. 116-117. For example, some of the Dukes of Burgundy tried to convince urban centers in the Burgundian Netherlands to support them by granting privileges and emphasizing a narrative of a central Burgundian state, though other Dukes, like Charles the Bold, decided instead to bleed the cities dry to get funds, and saw political push back in turn

[13]Henri Pirenne, *Medieval Cities: Their Origins and the Revival of Trade*, Princeton University Press, 1925, p.148

[14]Sheilagh Ogilvie, *Institutions and European Trade: Merchant Guilds 1000-1800*, Cambridge University Press, 2011, p. 162-163

spending today, it is no surprise that rulers in an era with far less sophisticated accounting and recording techniques would not try to make decisions based on what they might need to spend in the future, but instead would make those decisions based on what they knew they needed to spend in the present. The fact that some of these expenses, such as ransoms, directly affected their persons, and that there was a chance they would fall in battle and not have to worry about the matter afterwards anyway, just added to the decision calculus prioritizing current needs over future revenue.

Thus, "the commercialization of the economy, concentrated in the cities, provided new monetary means to princes of territories where these developments occurred at a significant scale.[15]" At the same time major cities benefited from the political power and exemptions from taxation that they could draw from monarchs. We will now see how the privileges granted to cities encouraged their development and therefore international trade.

[15]Charles Tilly, *Coercion, Capital and European States: AD 990-1992*, Blackwell Publishers, 1990, p. 225

Chapter 6

Merchant Charters

6.1 Case Study: The Italian Super-Companies

By the end of the thirteenth century, northern Italian merchants dominated the trade networks that crossed Europe. During the late 1200s, the Ricciardi family from Lucca displaced the Flemish textile merchants in the English wool market, thanks to support from Edward I of England in return for financing for his wars in Wales. After the Ricciardis lost the favor of the king, several other families took their place. Eventually, from the wool and textile trade in Northeastern Europe to the grain trade of the Mediterranean, three "super-companies," led by the Peruzzi, the Acciaiuoli and the Bardi families, amassed a huge proportion of the carrying trade of Europe by around 1320, largely due to the privileges granted to them by the kigns of England, France, and southern Italy.

Not only dealing in luxury goods, the super-companies transported a tremendous quantity of bulk goods aroudn Europe, peaking at a total of 45,000 tons of grain carried into Italy by just these three companies. For around 40 years, the companies, as well a host of smaller companies, dominated trade, both encouraging and supported by a rising tide of economic development in Europe. However, in the 1330s, the companies began to experience economic trouble. All of them abruptly "crashed within a period of thirty months, never to return.[1]"

[1]Edwin Hunt and James Murray, *A History of Business in Medieval Europe, 1200-1550*, Cam-

Although the Black Death, which arrived in Europe in 1347, certainly deterred new companies from taking their place, it was not the cause of the companies' abrupt collapse, as they all failed a few years in advance of the arrival of the plague. Rather, the companies failed due to the changes in the foundation upon which their success was based - specifically, the change in their relationships with the kings in their most important markets, England and Italy.

The Peruzzi and Bardi companies had both loaned huge sums to the kings of England throughout the early fourteenth century, as the Riccardi family had done at the end of the thirteenth century. Though they didn't trust the English kings to repay their debts in full, the real "profits to the companies came mainly from the generous trading privileges granted in return for loans, rather than from interest or its equivalent on the loans themselves.[2]" these grants of exclusive trading privileges conferred on the companies a huge advantage in the wool trade over other competitors, whether they were foreigners as well or domestic English merchants.

Similarly, the three super-companies dominated the grain trade from southern Italy and Sicily to the city-states of Northern Italy. By around 1300, the production of grain in the area around Florence could only meet the needs of the city for half the year, necessitating a massive importation of grain. The super-companies fulfilled that need, importing tens of thousands of tons of grain into northern Italy annually.[3] The companies were able to create this domination by fulfilling similar roles of financing and government support for Southern Italian rulers as they did for the English.

However, the Peruzzi, Acciaiuoli and Bardi companies overstretched themselves, and collapsed when the political climate shifted. The Peruzzi and Bardi families offered hundreds of thousands of florins to King Edward III for his prosecution of the initial stages of what would become the Hundred Years' War. Although the first few battles went well for England, King Edward reneged on his debts, decreasing the amount he would pay to the companies. More importantly to their financial well-

bridge University Press, 2006, p. 119

[2]Edwin Hunt and James Murray, *A History of Business in Medieval Europe, 1200-1550*, Cambridge University Press, 2006, p. 104

[3]Ibid

being, he stripped them of their trading privileges, hugely reducing their ability to dominate the wool and cloth trade of northern Europe. Thus, one of the two main sources of income for the super-companies vanished by fiat of a single king. Italian companies never regained their privileged position in England, as local merchants rose to take their place in their absence, and the English monarchs financed their wars with loans and charters from their domestic markets.

At about the same time that King Edward III took back the trading privileges from the Italian families, the grain producing areas of Sicily, Southern Italy and Southern France were hit by a major famine, causing a huge shortage in grain across the Mediterranean. These grain shortages, from 1329 throughout the 1330s, enticed the governments of northern Italian city-states to put price limits on the grain sold in the cities, to prevent price-gouging. Forced to sell at these low prices to support the local population, the companies were also forced "to scramble for sources in a seller's market. Then, as the 1330s wore on, city governments increasingly dealt with the grain authorities in southern Italy and Sicily, bypassing the super-companies.[4]" Thus, the second cornerstone of the super-companies success was cut out at a single stroke, again by the fiat of governments acting for political rationales rather than economic ones.

This episode demonstrates how thoroughly government actions affected medieval commerce and trade. Companies had something that governments wanted - money and a real expertise in its use - while governments had something that companies wanted - the regulations and privileges that could harm or benefit the companies (or, conversely, their competitors). As long as that point of congruent interest remained, trade and government could not be separated. With fewer sources of revenue for government, and more open mercantilism affecting merchants, these connections may have even been tighter than today. Yet, even now, it is impossible to speak of a marketplace fully divorced from the rules and actions of the state - even if it's only the fear that the state *might* act.

[4]Edwin Hunt and James Murray, *A History of Business in Medieval Europe, 1200-1550*, Cambridge University Press, 2006, p. 121

6.2 Merchant Charters

As the previous chapter discussed, one common way for rulers to raise money was to receive lump sum payments from cities in return for the granting of city charters. These charters could grant freedom from taxes and dues (such as the case of Bristol), monopolies over certain goods, or even some extent of political autonomy. Individual merchants and merchant concerns could be granted similar privileges as well, though not as far-reaching, as merchants could offer less in benefit to rulers in exchange.

When rulers granted cities charters which granted them privileges, trade followed. As itinerant merchants began putting down roots at the sites of market fairs throughout Europe around the turn of the millennium, rulers saw the potential benefits immediately in their quest for resources to wage warfare. In Flanders,

> At the beginning of the reign of Robert the Frisian (1071-1093), exemptions from tolls, grants of land, privileges limiting the episcopal jurisdiction or the requirements of military service were granted in considerable number to the cities then in process of formation.[5]

In exchange, he received money with which to fight his campaigns against his sister-in-law, the Countess Richilde, who claimed the County for her son, Arnulf.[6]

With the towns thus protected from undue interference from the lords who oversaw the County, "in these years, a considerable vitality becomes apparent for the first time.[7]" New trade routes opened, and coins and goods began to flow throughout the area. In the next hundred years or so, Flanders became a hub of commerce.

> In Bruges in the thirteenth century there was wool and cloth that came from England with lead, leather, coal and cheese; fish came from the north, including the dried salmon the Scots sold alongside their lard; there

[5]Henri Pirenne, *Medieval Cities: Their Origins and the Revival of Trade*, trans. Frank Halsey, Princeton University Press, 1925, p. 122

[6]In fact, given that Robert's brother, the previous Count of Flanders, had specifically left Flanders to Arnulf, and entrusted Robert with safeguarding him, it's clear that Richilde was in the right. However, as Robert's forces killed the sixteen year old Arnulf in battle, and captured Richilde, Robert successfully claimed the County - might makes right.

[7]Georges Duby, *The Early Growth of the European Economy*, Cornell University, 1978, p. 180

> were furs from Russia, ermine and sable from Bulgaria, gold from Poland; there was Rhine whine; there were wood, grains, iron, almonds, goatskins, saffron, rice; there were wax and anis, copper and figs, cumin and mercury; dates and sugar from the North of Africa, cotton from Armenia, silk from Tartary. Spring fleets brought wine and olive oil, figs and grapes from Portugal.[8]

Similarly,

> from the early twelfth century on the counts of Champagne carefully fostered the rise of this nearly permanent international market [the Champagne fairs] in their territory ... They succeeded spectacularly, as the Champagne fairs became the mots important international trading node in western Europe[9]

Monarchs also often granted large concessions to merchants, merchant guilds and companies. Given the more transitory nature and lesser political power of groups of individuals like these, their impact was unlikely to be long lasting. Nonetheless, they could spur growth in trading, the effect of which often lasted after they themselves were no longer receiving the benefits of it. Although the Italian merchants eventually lost their privileged position in English trade, their place was taken by Flemish and English merchants, who took advantage of the demand spurred by the earlier Italians, and continued in their stead.

Of course, in addition, "Cities and their capitalists drew indispensable protection for their commercial and industrial activity from the specialists in coercion who ran states[10]" In some sense, this is another form of the bargaining above, as it involves granting benefis to the merchants in exchange for benefits to the rulers, though in this case it is equally beneficial to both sides.

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[8] Michael Pye, *The Edge of the World: A Cultural History of the North Sea and the Transformation of Europe*, Pegasus Books, 2015, p. 294

[9] Sheilagh Ogilvie, *Institutions and European Trade: Merchant Guilds 1000-1800*, Cambridge University Press, 2011, p. 241

[10] Charles Tilly and Wim Blockmane eds., *Cities & the Rise of States in Europe, A.D. 1000 to 1800*, Westview Press Inc., 1994

With enough privileges granted,

> the city might well extend its privileges to a level of quasi autonomy. This meant far reaching powers in jurisdiction, administration, foreign trade and all related regulations and protection, coinage, provision for regional production and markets, and even military organization.[11]

When the cities had successfully gained privileges from rulers, as did the Champagne fair towns from the Dukes of Champagne in the 1100s, the Hanse towns from the Holy Roman Empire in the 1200s, and the Netherlands in the 1400s from the Dukes of Burgundy, they were able to prosper. On the other hand, when they had their autonomy removed, trade decreased and so did their prosperity.

6.3 Case Study: The Hanseatic League

The Hanseatic League of Northern Germany is the most famous of a number of associations between merchants and cities formed in the medieval period for the purpose of protecting the trading interests of members. Many of these even carried the name Hansa. In the eleventh century,

> *Hansa* became the word for a union of merchants, usually from one town, sometimes from several; there was the Flemish Hanse of the Seventeen Towns and the Danish Guild of St Canute...they were little arrangements, minimal alliances until the twelfth and thirteenth century .[12]

However, the well-known Hanseatic League was a group of over 100 towns and cities of Northern Germany, of far greater scale than the limited associations of the eleventh century. In 1189 and 1227, two major cities in Northern Germany, Hamburg and Lubeck, were granted the status of being a "Free Imperial City". The cities were granted this status in return for monetary support for the the Emperors Frederick

[11]Charles Tilly and Wim Blockmane eds., *Cities & the Rise of States in Europe, A.D. 1000 to 1800*, Westview Press Inc., 1994, p. 224

[12]Michael Pye, *The Edge of the World: A Cultural History of the North Sea and the Transformation of Europe*, Pegasus Books, 2015, p. 232

I "Barbarossa" and Frederick II's campaigns in Northern Italy. In addition, the Emperors saw that the status of Free Imperial City meant that any tolls from now on would go to them instead of to the nominal lords of the area Hamburg and Lubeck were in.

> The cities of lower Germany had the advantage of being remote from the imperial power bases situated in the south, which generally reduced their dependence on the king or emperor. Until the middle of the fifteenth century, the coastal Hanse cities were fairly successful in resisting the domination of princes in small surrounding territories, and thus they attained broad autonomy.[13]

With the autonomy gained in this way, the northern German cities were able to combine into the Hanseatic League for the support of their trade and the protection of their interests. Led by the cities of Hamburg and Lubeck, the Hansa Kontors in foreign cities wielded significant power over the local governments, allowing the Hansa to create favorable trading situations for themselves.

> For example, they became the only customers assured of complete repayment of their deposits in the case of a bankruptcy of a money changer or an innkeeper. In addition, the Count of Flanders suspended his right of salvage, granted Hanseatics exemption from tolls and some taxes, and streamlined judicial procedures for them. This body of special privileges did much to give Hanse merchants a competitive edge in Flanders and elsewhere.[14]

The merchants of the Hansa took ruthless advantage of this power, creating favorable trading situations for themselves all across the Baltic. With these advantages, the Baltic trade flourished, and cities like Hamburg and Lubeck grew massively rich from

[13]Charles Tilly and Wim Blockmane eds., *Cities & the Rise of States in Europe, A.D. 1000 to 1800*, Westview Press Inc., 1994, p. 227

[14]Edwin Hunt and James Murray, *A History of Business in Medieval Europe, 1200-1550*, Cambridge University Press, 2006, p. 166

trade. The international trading of the Hansa also spread wealth to the other cities with membership in the league, including Edinburgh, London, Bergen and Stockholm.

Unfortunately, the unique autonomy enjoyed by the Hansa did not last.

> In the second half of the fifteenth century, the cities of the German Hanse were all pushed to pay higher military and protection costs, due to the increased pressure of the surrounding princes. Warfare ruined cities like Dortmund and Braunschweig, which had to resist the attacks of the Duke of Braunshweig-Luneburg...The aggressions of the princes put the towns along the Baltic coast in a defensive position[15]

With the loss of their support from the governments of northern Germany, the Hanseatic League declined. The Hansa reached its peak in the 1400s, and by the 1500s it was on a decline, forced out of trading ports by the newly competitive Dutch - who, in turn, had been granted special privileges by the Hapsburgs, who had just inherited the Duchy of Burgundy, which included Flanders.

The example of the Hanseatic League is perhaps the most clear case of the mechanism discussed here working. A large group of towns received privileges from their ruler, the Holy Roman Emperor, and created a great trade empire from these privileges. Here the needs of warfare created circumstances which strongly benefited trade, as too it did in the other examples given in this chapter. Thus, city charters and merchant privileges given out of the needs of warfare beneficially impacted trade.

[15] Edwin Hunt and James Murray, *A History of Business in Medieval Europe, 1200-1550*, Cambridge University Press, 2006, p

Chapter 7

Conclusion

"In 1492, Columbus sailed the ocean blue," and discovered the Americas, opening them up to European colonization and exploitation. Over the next four hundred years, European powers dominated the globe, enforcing economic hegemony over the rest of the world. First the Spanish, then the Portuguese, then the Dutch, and finally the British - somehow Europeans were able to carve out ever increasing parts of the world system for themselves.

In 1907, a Professor at St. Andrews was able to write an instructive book on the British Empire, saying

> The British Empire is the largest Empire on the face of the globe. It is also the wealthiest...The sun never rises upon it and it never sets. It stretches through all latitudes, over all longitudes; it includes all climates, its dominion extends over all the seas and oceans of the world... the area of the British Empire is 11,490,000 square miles. This is equal to one-fifth of all the land on the globe. The population is 410,000,000. This is about one-fourth of all the inhabitants on the face of the globe [1]

With colonies on every continent but Antartica, and with sole possession of one-fifth of the landmass of the world, it was impossible to deny that the British Empire was the greatest and most powerful Empire on earth at the time. And its only competitors

[1] J. M. D. Meiklejohn, The British Empire: The Geography, Resources, Commerce, Land-ways and Water-ways of the British Dominions Beyond the Seas, Meiklejohn and Holde, 1907, p. 3

were other European powers, which may not have had the extent or wealth of the British Empire, still had similar dominion over various parts of the world.

At the beginning of this thesis, we asked the question how Europeans were able to become an economic hegemon in the world, despite the ruinous effects of the wars the consumed Europe again and again, from the Hundred Years War and the Wars of the Roses through to the Thirty Years War and the Napoleonic Wars. Wars cause immense destruction, with the Thirty Years War, for example, killing up to a third of the population of central Europe, at the same time as civil wars and insurrection wracked England, France, Italy, Portugal and Spain.

As this thesis explains, in some ways, warfare promoted economic growth. The needs of states for resources to wage wars led them to grant special privileges to merchants and cities, which then used those privileges to drive trade. This trade created economic growth, which prevented Europe from falling behind despite the devastating consequences of wars. Throughout the period, warfare in Europe became more expensive, leading rulers to grant even more concessions and support cities even more, in return for money to fund their increasingly expensive wars. Other parts of the world saw a different process.

7.1 The Indian Contrast

In Mughal India, in contrast to the constant and increasing revenue needs of competing European states, "the revenue needs of the empire, vast though they were, could be met from massive amounts of land revenue collected by a rather articulated and efficient chain of government officials." Without the need to conduct warfare against peer competitors, "the Mughals had too much money to need to trade off revenue for rights as European rulers had to do.[2]"

Because the Mughal rulers had no need to bargain for additional funds, they did not deign to do so. Instead, they kept the system in place as it was, allowing local

[2]James Tracy ed., *The Political Economy of Merchant Empires: State Power and World Trade 1350-1750*, Cambridge University Press, 1991

nobles to raise resources from their lands and send them to the central government. There were no institutional innovations, like the charters and privileges here discussed, to drive increasing economic growth.

Hoffman's arguments that competition in Europe drove decisive technological advances notwithstanding, it's far from clear that technological advantage alone sufficed to drive the English conquest of India. Once the Indian states which suceeded the Mughals understood the nature of the competition they were up against with the English, they should have been able to import technology to make up the difference, and they often did. At the Battle of Assaye, "the fiercest that has ever been seen in India," English troops under Arthur Wellesley, later the Duke of Wellington, were faced by "about 60 pieces of cannon...of the largest calibres.[3]"

It was not India's technological deficit which allowed the English to take the whole country, but rather an economic deficit. In 1750 rulers in India could achieve a revenue of around 267 Rupees per square mile on average. The East India Company, on the other hand, could draw on a revenue of 321 Rupees per square mile in 1766, ten years after their first permanent inroads into the sub-continent, and 423 rupees per square mile thirty years later, in 1801.[4]

The East India Company was a product of the willingness of England, like other European states, to grant wide privileges and autonomy to its traders. In fact, the Company acted essentially as its own state-like entity from the early 1700s until the Mutiny. And, like the states of Europe, the East India Company's needs for more funds drove it to make entirely different institutional arrangements than those already prevalent in India, creating a revenue advantage which allowed them to out spend all of their competitors.

[3]Arthur Wellesley, *The Dispatches of Field Marshal the Duke of Wellington*, Oxford University Press, 1835, p. 305-311

[4]Stephen Broadberry, Johann Custodis and Bishnupriya Gupta, "India and the Great Divergence: An Anglo-Indian Comparison of GDP per Capita, 1600-1871", *Explorations in Economic History*, 2015, p. 68

7.2 Other Mechanisms for War to Cause Economic Growth

As mentioned in Chapter 3, this thesis proffers one possible mechanism through which warfare promoted economic growth in the late Medieval period through to the Renaissance. Despite the unfortunate implications of this idea, historians have offered multiple other means, across all time frames, by which war may have a positive influence on economic growth. For instance, many historians believe that the Great Depression ended due to the enormous increase in employment created by the start of World War II, or at least that this hastened the end. Similarly, some attribute the take-off of the Industrial Revolution to the labor and materiel needs engendered by the Napoleonic Wars.

There is no reason to think that any of this was pre-planned. Rulers did not make these concessions because they looked ahead to a future where their cities provided an economic power far greater than those in other countries. Rather, the competition between the states gave them the need to raise resources, and one way in which they could do so happened to be useful for the future.

It was not merely in the granting of privileges that the need for resources produced unintended benefits. "As a byproduct of preparations for war, rulers willy-nilly started activities and organizations that eventually took on lives of their own: courts, treasuries, systems of taxation, regional administrations, public assemblies, and much more.[5]"

Another possibility for positive by-products of war, discussed by Mark Dincecco et. al., involves the "safe harbor effect," by which cities increase their population when war takes place in the neighborhood. As populations shelter from devastation, he concludes "that conflict exposure was associated with a 6-11% average increase in city population.[6]" As urbanization is often considered a driver of economic growth,

[5] Charles Tilly, *Coercion, Capital and European States: AD 990-1992*, Blackwell Publishers, 1990, p. 75

[6] Mark Dincecco and Massimiliano Gaetano Onorato, "Military Conflict and the Rise of Urban Europe", *Journal of Economic Growth*, 2016, p. 24

this too could have promoted European economic growth.

Another potential means for warfare-caused growth was the transferal of military technology to civilian applications. Familiar to us today with such things as computers and GPS derived from military research, this also could have had an effect, though lesser, during the middle ages. For example, shipbuilding techniques, such as the lowering of the forecastle and the introduction of copper-sheathing, were easily applicable to civilian construction - especially since before the 1600s, most warships were merely impressed merchantmen anyway. Similar innovations, such as gunpowder adapted to mining, springs for gun-carriages adapted to wagons and personal carriages, and map-making for military planning adapted to construction, could also drive economic growth.

Other mechanisms abound, from increased demand driving economies as occurred during World War II, to the need to enforce security (e.g., the Roman anti-piracy campaigns). These mechanisms might not apply in every conceivable situation, but they have manifested in numerous historical settings, and hence are both theoretically plausible and empirically identifiable. They offer a potential mechanism through which the prevalent warfare in Europe did not decrease economic growth. Rather, the competition created the conditions through which Europe was able to prosper, despite the negative effects of individual wars.

I do not claim that this is the fundamental reason that Europe was able to achieve economic dominance over other parts of the world. I do assert, however, that it is at least a contributing factor to Europe's eventual hegemony, as it explains Europe's surprising economic resiliency despite the prevalence of warfare.

A number of potential future areas for investigation become clear as a result of this discussion. For one, the extent to which this theoretical model differed in Europe than in China or India, or, for that matter, the Roman Empire, could lead to insights both about its applicability to places other than Europe. In addition, further examination of the problem could well indicate that this relationship between warfare and trade constitutes a significant reason for the Great Divergence.

Secondly, another place for future work could be to examine the other ways in which warfare could increase economic growth, such as those mentioned above, to make the model more inclusive. Finally, statistical research into the models applicability given more numerical evidence could help understand it, as well as potentially add some interesting nuance or additional parts to the argument.

7.3 Concluding Thought

Theoretical models can unfortunately never fully capture all of the intricacies of real history. Theories try to abstract immensely complex systems to only a few variables, but "history perversely refuses to follow the straightforward path predicted by theory.[7]" Unlike in physics, where complex problems can be isolated to a few variables at a time to piece apart the whole, the nature of history, as well as are limited knowledge of it, prevents similar methods being so useful in history.

History is the interaction of countless intricate systems and institutions over and over again, permeated by the perverse actions of irrational humans. I've laid out one of these systems in this thesis, but it is opposed by countervailing forces, not least of which is the destructive effects of war itself. Other forces also act upon the economies and societies of states, such as the tendency of some states, such as France under the Sun King to over-centralize in response to resource demands, or the existence of exogenous sources of income which totally change the political dynamic, such as the gold and silver flowing from the New World into Spain from the 1500s through the 1700s. All of these systems interact in often surprising ways to create what occured in history and the world we live in today.

Nonetheless, theoretical models such as those discussed in the introduction offer tools with which to examine the historical record, and understand how and why history occured as it did. The game theorist Anatol Rapoport wrote "the value of game theory is not in the specific solutions it offers...rather, the prime value of the theory is that it lays bare the different kinds of reasoning that apply in different kinds

[7] John Hatcher and Mark Bailey, *Modeling the Middle Ages: The History and Theory of England's Economic Development*, Oxford University Press, 2001, p. 182

of conflict.[8]" Similarly, historical theories can only offer approximate solutions, but nonetheless help disentangle the tangled web of history.

Thus, although the mechanism I lay out here certainly does not fully account for all the individual accidents and surprises of history, I still believe it offers a useful addition to the theoretical perspective offered by those who proffer competition as the cause for the Great Divergence.

[8] Anatol Rapoport, The Use and Misuse of Game Theory, *Scientific American*, 1962

Bibliography

Abu-Lughod, Janet L. 1989. *Before European Hegemony: The World System A.D. 1250-1350.* Oxford University Press.

Anievas, Alexander, and Kerem Nisancioglu. 2015. *How the West Came to Rule: The Geopolitical Origins of Capitalism.* Pluto Press.

Bisson, Thomas N. 2009. *The Crisis of the Twelfth Century: Power, Lordship, and the Origins of European Government.* Princeton University Press.

Bonney, Richard. 1999. *The Rise of the Fiscal State in Europe C. 1200-1815.* Clarendon Press.

Broadberry, Stephen, Johann Custodis, and Bishnupriya Gupta. 2015. "India and the Great Divergence: An Anglo-Indian Comparison of GDP per capita, 1600-1871." *Explorations in Economic History*, pp. 58–75.

Chaudhuri, K. N. 1985. *Trade and Civilisation in the Indian Ocean: An Economic History from the Rise of Islam to 1750.* Cambridge University Press.

Dincecco, Mark. 2011. *Political Transformation and Public Finances: Europe, 1650-1913.* Cambridge University Press.

Dincecco, Mark, Giovanni Federico, and Andrea Vindigni. 2011. "Warfare, Taxation, and Political Change: Evidence from the Italian Risorgimento." *Journal of Economic History* 71:887–914.

Dincecco, Mark, and Massimiliano Gaetano Onorato. 2016. "Military Conflict and the Rise of Urban Europe." *Journal of Economic Growth*, March, 1–24.

Duby, Georges. 1978. *The Early Growth of the European Economy.* Cornell University Press.

Eloranta, Jari. 2005. "Military Spending Patterns in History." *EH.Net Encyclopedia.*

Epstein, Steven A. 2009. *An Economic and Social History of Later Medieval Europe, 1000-1500.* Cambridge University Press.

Fedorowicz, J.K. 1980. *England's Baltic Trade in the Early Seventeenth Century Trade: A Study in Anglo-Polish Commercial Diplomacy.* Cambridge Studies in Economic History. Cambridge University Press.

Fukuyama, Francis. 2011. *The Origins of Political Order: From Preshuman Times to the French Revolution.* Farrar Straus And Giroux.

Gardiner, Samuel. 1888. *History of the Great Civil War.* Phoenix Press. Reprinted in 2002.

Geary, Patrick J., ed. 1989. *Readings in Medieval History.* Broadview Press.

Gelderbloom, Oscar. 2013. *Cities of Commerce: The Institutional Foundations of International Trade in the Low Countries, 1250-1650.* Princeton University Press.

Greengrass, Mark. 2014. *Christendom Destroyed: Europe 1517-1648.* Penguin Books.

Hannam, James. 2009. *God's Philosophers: How the Medieval World Laid the Foundations of Modern Science.* Icon Books.

Hatcher, John, and Mark Bailey. 2001. *Modelling the Middle Ages: The History and Theory of England's Economic Development.* Oxford University Press.

Heer, Friedrich. 1998. *The Medieval World: Europe 1100-1350.* Translated by Janet Sondheimer. Welcome Rain.

Hicks, Michael. 1995. *Bastard Feudalism.* Longman Group.

Hoffman, Philip T. 2015. *Why did Europe Conquer the World?* Princeton University Press.

Holland, Tom. 2008. *The Forge of Christendom: The End of Days and the Epic Rise of the West.* Anchor Books.

Holt, J.C. 1992. *Magna Carta.* Cambridge University Press.

Hunt, Edwin S., and James M. Murray. 2006. *A History of Business in Medieval Europe, 1200 - 1550.* Cambriedge University Press.

Israel, Jonathan I. 1989. *Dutch Primacy in World Trade, 1585-1740.* Clarendon Press.

Landes, David S. 1998. *The Wealth and Poverty of Nations: Why Some are so Rich and Some so Poor.* W.W. Norton and Company.

Lopez, Robert S. 1976. *The Commercial Revolution of the Middle Ages, 950-1350.* Cambridge University Press.

Luard, Evan. 1986. *War in International Society: A Study in International Sociology.* Yale University Press.

McCloskey, Deirdre N. 2006. *The Bourgeois Virtues: Ethics for an Age of Commerce.* University of Chicago Press.

McCormick, Michael. 2002. "New Light on the Dark Ages: How the Slave Trade Fuelled the Carolingian Economy." *Past and Present*, pp. 17–54.

Meiklejohn, J. M. D. 1907. *The British Empire: The Geography, Resources, Commerce, Land-ways and Water-ways of the British Dominions Beyond the Seas.* Meiklejohn and Holden.

Morris, Ian. 2010. *Why the West Rules - For Now: The Patterns of History, and What They Reveal About the Future.* Farrar Straus And Giroux.

Muller, L., P.R. Rossner, and T. Tamaki. 2011. *The Rise of the Atlantic Economy and the North Sea/Baltic Trade, 1500-1800: Proceedings of the XVth World Economic History Congress (Utrecht, Netherlands 2009).* Beiträge zur Wirtschafts- und Sozialgeschichte. Steiner.

Mun, Thomas. 1895. *England's Treasure by Forraign Trade.* Reprint of the 1664 Edition. MacMillan New York.

Ogilvie, Sheilagh. 2011. *Institutions and European Trade: Merchant Guilds 1000-1800.* Cambridge University Press.

Ormrod, David. 2003. *The Rise of Commercial Empires: England and the Netherlands in the Age of Mercantilism, 1650-1770.* Cambridge University Press.

Paine, Lincoln. 2013. *The Sea and Civilization: A Maritime History of the World.* Atlantic Books.

Palma, Nuno. 2016. "Sailing away from Malthus: intercontinental trade and European economic growth, 1500–1800." *Cliometrica* 10 (2): 129–149.

Parthasarathi, Prasannan. 2011. *Why Europe Grew Rich and Asia Did Not: Global Economic Divergence, 1600-1850.* Cambridge University Press.

Pirenne, Henri. 1925. *Medieval Cities: Their Origins and the Revival of Trade.* Translated by Frank D. Halsey. Princeton University Press.

Polo, Marco. 1918. *The Travels of Marco Polo.* Edited by William Marsden. J.M. Dent & Sons.

Pomeranz, Kenneth. 2000. *The Great Divergence: Europe, China and the Making of the Modern World Economy.* Princeton University Press.

Postan, M.M. 1964. "The Costs of the Hundred Years' War." *Past and Present,* April, 34–53.

———, ed. 1966a. *The Cambridge Economic History of Europe: Volume 1: The Agrarian Life of the Middle Ages.* 2nd Edition. Volume 1. Cambridge University Press.

———. 1966b. "The Economic and Political Relations of England and the Hanse (1400-1475)." In *Studies of English Trade in the Fifteenth Century,* edited by Eileen Power and M.M. Postan, 91–153. Barnes & Noble.

———. 1972. *The Pelican Economic History of Britain: Volume I, The Medieval Economy and Society: An Economic History of Britain in the Middle Ages.* Volume I. Penguin Books.

Powicke, Sir Maurice. 1962. *The Oxford History of England: Volume IV: The Thirteenth Century, 1216-1307.* 2nd Edition. Volume IV. Edited by Sir George Clark. Oxford University Press.

Pye, M. 2015. *The Edge of the World: A Cultural History of the North Sea and the Transformation of Europe.* Pegasus Books.

Rapoport, Anatol. 1962. "The Use and Misuse of Game Theory." *Scientific American.*

Rosenthal, Jean-Laurent, and R. Bin Wong. 2011. *Before and Beyond Divergence: The Politics of Economic Change in China and Europe.* Harvard University Press.

Sen, Amartya, John Muellbauer, Ravi Kanbur, Keith Hart, and Bernard Williams. 1988. *The Standard of Living.* Tanner Lectures in Human Values. Edited by Geoffrey Hawthorn. Cambridge University Press.

Seward, Desmond. 1978. *The Hundred Years War.* Penguin Books.

Small, Graeme. 2009. *Late Medieval France.* Palgrave Macmillan.

Strayer, Joseph R. 1965. *Feudalism.* Robert E. Krieger Publishing Company.

Tilly, Charles. 1990. *Coercion, Capital, and European States.* Blackwell Publishers.

Tilly, Charles, and Wim P. Blockmans, eds. 1994. *Cities & The Rise of States In Europe, A.D. 1000 To 1800.* Westview Press Inc.

Tracy, James D., ed. 1991a. *The Political Economy of Merchant Empires: State Power and World Trade 1350-1750.* Cambridge University Press.

———, ed. 1991b. *The Rise of Merchant Empires.* Cambridge University Press.

Watts, John. 2009. *The Making of Polities: Europe 1300-1500.* Cambridge University Press.

Weir, Alison. 1995. *Lancaster and York: The Wars of the Roses.* Random House.

Wellesley, Arthur. 1835. *The Dispatches of Field Marshal the Duke of Wellington: During his Various Campaigns in India, Denmark, Portugal, Spain, the Low Countries and France, from 1799-1818.* Volume 3. Oxford University Press.

White, Lynn. 1962. *Medieval Technology & Social Change.* Oxford University Press.