Dutch Hegemony: Global Leadership during the Age of Mercantilism

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Abstract

In this paper we explore the sources of Dutch hegemony, focusing on Dutch predominance of the economic and military "leading sectors" of the capitalist world economy. We discuss the theoretical debates on the nature of hegemony, and suggest that during this period, the "age of mercantilism", the Baltic, Asian, and Atlantic trades were crucial for economic dominance of the European world system. In the course of our historical discussion of these leading sector trades, we provide a comparative analysis of quantitative data for each trade for the great European powers of the period (the United Provinces, England, France, Spain, and Portugal). We combine these measures, using the common denominator of ship passages, into a single measure of global leading sector trade, and use this measure to determine to what extent Dutch economic hegemony went beyond regional trade dominance. We compare our measure of economic leading sectors with Modelski and Thompson's military leading sector measure of sea power, to examine how military and economic predominance are related during this period. Finally, we evaluate the wide divergence in dates for Dutch leadership and offer our own based on the comparative quantitative data and historical analysis.

How could a peripheral swampy delta area – where nothing would grow – develop into the dynamic centre of the world economy in the seventeenth century?

(Van Zanden 1993, p. 19)

1 Introduction

The rise of the Dutch Republic of the United Provinces in the sixteenth and seventeenth centuries is a particularly interesting case for political scientists, historians, and sociologists. Through a revolution, this disorganized group of

cities and provinces with conflicting interests was fashioned into the Dutch Republic. Although this motley rebellion seemed to have little hope of winning against the powerful Habsburgs, the Dutch not only won, but became the predominant state in the capitalist world economy *during* its war for independence, and forty years *before* Spain recognized the autonomy of the United Provinces. In addition, the Dutch Republic was the first to emerge as truly independent from a monarch, two centuries before the American bid for independence.

As Dutch historian Johan Huizinga (1968, p. 10) suggests "... where else was there a civilisation that reached its greatest peak so soon after state and nation came into being?" How did the Dutch Republic become hegemonic? What elements led to the United Provinces' predominant position in the world economy? Although there has not been convergence on the dating of Dutch hegemony, the world system literature on hegemony has consistently agreed that the Dutch serve as one of the few important cases of world-system leadership.[1] Yet as Wallerstein (1984, p. 38) admits, "Holland [is] least plausibly [hegemonic] because it was least of all the military giant of its era," and there has been little quantitative evidence of the Dutch reign of the capitalist world economy. Others, such as Kennedy (1987), ignore the Dutch case altogether.

In this paper, we explore the sources of Dutch hegemony and discuss the theoretical debates on the nature of hegemony or leadership. We focus on predominance of economic and military leading sectors, and suggest that the Baltic, Asian, and Atlantic trades were crucial for dominating economically during this period. Using quantitative data we have gathered, we discuss these trades, compare them with Dutch military predominance, and determine an approximate dating for the period of Dutch hegemony.

2 Theories of hegemony

Two systemic theories of global dominance have predominated in the literature. World-economy theory focuses on a hegemon predominating over production, trade, and finance simultaneously (Wallerstein 1984), while long-cycle theory centres on global leaders predominating over leading economic sectors and emerging as superior from a global war (Modelski and Thompson 1994). While world-economy theory stresses the economic strength of the hegemon (although military strength has also been acknowledged), long-cycle theory emphasizes the military strength of the global leader (although economic strength has been increasingly highlighted).

From a world-economy perspective, Wallerstein (1980, 1984; Hopkins and Wallerstein 1979) suggests that a hegemon emerges as a result of social and technological innovations that allow a core power to develop a simultaneous competitive advantage in agro-industrial production, trade, and finance. Due to this strong competitive advantage, the core power attempts to impose "free trade" on the rest of the world economy. Hegemonic status is attained when the predominant core power is influential enough to persuade other nations to follow political, economic, and cultural strategies which benefit that power. Wars can advantage the hegemon when its status is rising, but once it dominates the world economy, it is in the hegemon's best interest to maintain the status quo and squelch any wars that might challenge its position. Hegemony is lost when the hegemon's technological innovations are reproduced by its competitors, and production for the world market becomes less profitable. The hegemon's military expenses also slow its growth, and as capital flows out of the hegemon and into more profitable foreign investment, greater trade protectionism and even greater profit losses occur. War becomes a greater probability as the hegemon declines.

Long-cycle's global leader emerges from a global war as leader, dominates the system, and finally, besieged by competition, begins to decline (Modelski 1978, 1987; Modelski and Thompson 1988, 1994). This perspective focuses on the "global reach" of global leaders, particularly the leaders' military reach, measured as the number, size, and power of naval vessels (sea power). Leading economic sectors, based on technological innovation, set the stage for the rise of a great power (Modelski and Thompson 1994). A great power emerges as predominant when innovation and strategy allow it to capture more than half the total sea power after a global war. The global leader uses its position to supply political stability to the world economy, and resists any shifts (particularly wars) that might challenge its leadership. The leader also establishes economic stability, which initially is most advantageous for the leader, but over time benefits all the nations in the world system, deteriorating the leader's advantage. As competitors challenge the leader, military costs continue to mount, and the leader is delegitimized by its imperialistic attempts to maintain its position. As the leader loses its status, another period of conflict between nations begins as states jockey for position in the next cycle of global leadership.

Both theories suggest the importance of economic and military strength to the development of the hegemon. Recent long-cycle theory increasingly identifies the importance of economic predominance *before* the global war that consolidates the leader's position (Rasler and Thompson 1989, 1991a, 1991b; Modelski and Thompson 1994). World-economy theory has also recognized the importance of military strength to the hegemon's economic predominance (Boswell and Sweat 1991). Since both military and economic leadership are sources of hegemony, by carefully examining both elements historically, we can develop a clearer understanding of the nature of hegemony.

Yet, these differing theoretical perspectives also leave us with a number of questions when we study the Dutch case. What is the relationship between

Table 1 Chronology of selected important events surrounding Dutch world leadership and hegemony

Year	Leadership	Hegemony	*War*[1]	Chronology
1560			*	Dutch War of Independence (1566-1609)
1570		Ascent (1575)	*	Various conflicts and alliances between provinces, rebellion against Spain
1580	Global War (Dutch War of Independence)		*	Union of Utrecht, formation of United Provinces (1579)
1590			*	English defeat of Spanish Armada (1588)
1600			*	Dutch East Indies Company (VOC) formed (1602) Dutch oust Portuguese from Indonesia (1605)
1610	World Power (1609)			Twelve-Year Truce (1609)
1620		Victory (1625)	*	*Thirty Years War* (1618-48); Renewed Dutch War of Independence (1621-48); West Indies Company (WIC) formed (1621) England, Denmark, Sweden, & others join French-Dutch alliance (1624)
1630			*	Dutch capture many Portuguese bases in West Africa and Brazil (1621-45)
1640	Delegitimation (1640)		*	Dutch capture trade in Japan (1637-38), capture last Portuguese strongholds in Indonesia and Gold Coast (1640-42)
1650				Treaty of Munster, Spain recognizes Dutch Independence (1648) Dutch expel Swedish from New Amsterdam (1647-55) Dutch-Indian Wars in North America (1655-64); First English Navigation Act (1651); First Anglo-Dutch War (1652-55); First Northern War (1655-60)
1660	Deconcentration (1660)			War with Portugal over Brazil, Dutch renounce claim (1657-61) Second and Third English Navigation Acts (1660,1662); English seize New Netherlands (1664); Second Anglo-Dutch War, France allies with England, Dutch lose New Amsterdam (1665-67); Fourth English Navigation Act (1667)
1670		Decline (1672)	*	Third Anglo-Dutch War (1672-74); *Franco-Dutch War* (1672-78) Rebellion installs William III as Stadtholder (1673); Fifth English Navigation Act (1673); Anglo-Dutch Alliance (1678)
1680				Dutch form League of Augsburg (against French expansion) (1686)
1690			*	*War of the League of Augsburg* / Grand Alliance (1688-97) "Glorious Revolution" in England (1688)
1700			*	Sixth English Navigation Act (1696); *War of Spanish Succession* (1700-13); Dutch enter war (1702)
1710				Dutch suppress Indonesian rebellion (1712-19); Dutch emerge "victorious" but devastated from War of Spanish Succession (1713)

[1] An asterisk in this column indicates whether a "global war" was being fought during the decade listed.

Source: World Economy Hegemony Phases: Wallerstein (1984); Long Cycle Hegemony Phases: Modelski and Thompson (1994); Chronology of Wars/Events: Dupuy and Dupuy (1970), Wright (1942), and Levy (1983, 1985).

leadership and hegemony? Table 1 shows a time line for Dutch hegemony/leadership as conceptualized by world-economy theory and long-cycle theory, and includes a chronology of wars and other events. As the table shows, long-cycle and world-economy theories suggest different dates for Dutch hegemony. Long-cycle theory claims that the Dutch emerge from the global war of the first half of the Dutch War of Independence, becoming a "world power" in 1609 when the Twelve Years Truce is signed and the Dutch emerge de facto victorious. The Dutch have a short reign, becoming delegitimated in 1640.[2] From a world-economy perspective, the Dutch achieve hegemonic status in 1625, and begin their decline in 1672, with the beginning of the Third Anglo-Dutch War.[3] While a variety of pieces of economic data are offered by Wallerstein (1974, 1984), no continuous comparative data of economic concentration is offered in support of this claim. Based on this limited data, is the claim for hegemony justified? The case for Dutch hegemony remains unsettled.

Another issue concerns the expected relationship between hegemony and war. Long-cycle theory expects the global leader to emerge after a global war, and during its period of leadership to discourage any wars which might upset the status quo. World-economy theory similarly expects the hegemon to deter any large scale wars that might overturn the hegemon's position. Yet, both of these theories suggest that the Dutch were at the height of their powers during the Thirty Years War, a war which involved and affected almost every European power (Nye 1990). Wallerstein argues that this war helped secure the position of the Dutch, without explaining why it occurred during their reign, and Modelski and Thompson simply argue that the Thirty Years War was not a global war, instead focusing on the first portion of the Dutch War of Independence (which they date from immediately after the Union of Utrecht to the Twelve Years Truce, 1580-1609). The Dutch case challenges both theories' conceptualizations of the relationship between hegemony and war.

An effective approach to conceptualizing hegemony should focus on the leading sectors of the period (Rasler and Thompson 1989, 1991a, 1991b; Modelski and Thompson 1994). Leading sectors are the driving force of development, and measurements of leading sectors take into account market share as well as efficiency. For example, rather than measuring military power simply in terms of the number of soldiers or ships, Modelski and Thompson (1988) construct a measure of "sea power", which counts only "advanced" units, updating this definition as new innovations are developed. Similarly, in order to measure economic strength, we should focus upon the economic leading sectors of the time, counting only the most important economic sectors of the period.

Trade was the major source of economic growth during the mercantilist age. As noted earlier, Wallerstein (1984) suggests that a hegemon predominates over production, trade, and finance. We argue instead that the hegemon

predominates over the leading economic sectors of the period, in this case the Baltic, Asian, and Atlantic trades. For the Dutch, trade determined production, rather then production determining trade. The Dutch first rose as a prominent centre of commerce, which *led* to its accumulation of capital and expansion of industry. Dutch industrial production (including the shipbuilding and textiles industries) and their fiscal innovations (in particular their development of long-term debt financing) developed in response to their trading dominance (Tracy 1985; 't Hart 1993; Davids 1995).

In this paper, we examine the case of Dutch hegemony historically in order to better understand and add to these conceptualizations. We focus on the historical story behind the economic "leading sectors" of the period – the Baltic, East Asian, and Atlantic maritime trades. In the course of our historical discussion of these leading sector trades, we provide a novel comparative analysis of quantitative data for each trade. In addition, we discuss the historical context for wars during this period.

Our next task is to combine all three quantitative measures, using the common denominator of ship passages, into a single measure of global leading sector trade. We use this measure to determine the extent to which Dutch economic hegemony was global, rather than merely regional. Fortunately, Modelski and Thompson (1988) have already laboriously constructed a measure of the leading *military* sectors with their measure of sea power (which takes into account technological changes and improvements over time). We compare our measure of economic leading sectors with the military leading sector measure of sea power, to examine how military and economic predominance were related. Finally, we evaluate the wide divergence in dates for Dutch hegemony and offer our own based on the comparative data and historical analysis.

3 The sources of Dutch maritime hegemony

Dutch hegemony was achieved through political, military, and economic means. Our historical argument is focused on the development of the leading sectors of trade. We begin by discussing Dutch advantages in trade, and then turn to a historical analysis of the development of the leading economic sectors of Baltic, Asian, and Atlantic trades.

The Dutch had three major advantages over their trading competitors in terms of shipping: a central geographic location; lower risk trade; and an efficient and innovative shipbuilding industry. As Huizinga (1968) has remarked, the proximity of the sea and the shipping industry were "first and foremost" in the development of the Dutch Republic. A central geographic position made trade more profitable, while the many waterways in the Netherlands encouraged the development of shipbuilding and trade. By initially focusing on bulky lower risk trade, the Dutch collected higher profits since they did not have to devote as many resources to guarding their ships. Finally, the shipbuilding industry in the United Provinces developed many innovations which allowed the Dutch to trade more efficiently than their competitors.

Bordered by three seas and littered with waterways, the Dutch used ships as a low-cost transportation system and developed efficient shipbuilding methods before other European countries focused on seaborne trade (Huizinga 1968; Slicher Van Bath 1982). The Dutch developed close ties to the Baltic region, affording Dutch shipbuilders direct access to low cost lumber (while other countries often relied on Dutch merchants for timber) (Israel 1989). Their geographic position meant that the Dutch could travel to both Western Europe and the Baltic in one season before ice blocked northern ports, and their variety of harbours meant that they could build ships which could travel to almost any country's harbours. In addition, Dutch waterways led to the development of an inland fishing industry, which evolved into the sea-going herring industry that dominated the Dutch economy in the 15th century. Dutch shipping for both trade and fishing developed into a comparative advantage over other countries. Wallerstein (1980, p. 40) remarks "the Dutch found themselves for some time in the happy circumstance of the spiral effect: circular reinforcement of advantage."

Second, Dutch merchants faced lower *risks* than their competitors in building trade networks. Geography again was advantageous, as a central location led to shorter voyages. In addition, because the Dutch initially shipped bulky goods (such as fish, grain, and lumber), their ships were generally safe from attacks, since pirates were more interested in low-bulk high-value items that were easily transported and sold. When Dutch merchants began trading more valuable goods, they were supported by a strong Dutch navy, as well as by the "Sea Beggars". State authorized privateers, the Sea Beggars protected Dutch voyages while looting and destroying competitors' ships (Barbour 1929; Teitler 1973; Van Houtte 1977; Bruijn 1993).

This lower risk for the Dutch translated into less costly ships. While other countries built ships with tapered bottoms that could move swiftly in defense against pirates and privateers, the Dutch could focus on elements of shipbuilding that decreased costs for merchants. The famous "fluyt" ships (large, slow, nearly flat-bottomed ships that held a great deal of cargo with relatively small crews) provides an excellent example of how an advantage in production developed *in response* to trade and security advantages, rather than the other way around (Barbour 1929).

Third, the Dutch developed efficient shipbuilding methods, using innovative machinery and standardization of parts, so that ships could be built more quickly and with fewer workers (Wallerstein 1980; Barbour 1929). High wages

and technical schools attracted the best ship craftworkers throughout Europe, and growing subsidiary industries, such as cartography and the making of navigational instruments, resulted in Dutch ships that were not only the most efficient, but also had the best navigational instruments and maps of any of the great powers (Goldstein and Rapkin 1991). Innovations such as the "fluyt" and the "buss" (that incorporated on-ship areas for processing and salting herring) revolutionized the shipping industry (Barbour 1929, 1963; de Feyter 1982; Maland 1983).

Overall, the geographical location, low-risk trade, and shipbuilding innovations of the Dutch gave them a widely-recognized advantage over their competitors. Of these, Wallerstein (1980) focuses on the last, claiming that shipbuilding innovations led to a trading advantage, which in turn lowered the cost of raw materials for shipbuilding, creating a reinforcement of advantage. Unger (1978) and Goldstein and Rapkin (1991) similarly argue that shipbuilding acted as a leading sector due to the Dutch technological advances. Yet Israel (1989, p. 21) disputes this, arguing: "Technical and design innovation was thus crucial to the making of Dutch supremacy in shipping, but was not the sort of innovation which derived from advanced techniques which others lacked." We question whether productive efficiency in shipbuilding (even along with high efficiency in industrial crops, fishing, and textiles) indicates a productive "superiority *over all other core powers*" (Wallerstein 1980, p. 39, emphasis his). Amsterdam was an entrepot, and the Dutch made most of their wealth trading products which had been made elsewhere. Shipbuilding was only a leading sector because of the centrality of maritime trade for generating wealth during the mercantile (pre-industrial) phase of capitalism.

4 Historical background for leading sectors

Given an understanding of the advantages in shipping held by the Dutch, we turn now to a description of the historical context in which their rise to hegemony took place in the Baltic, East Asian and Atlantic trades.

4.1 Baltic trade and the Mediterranean

Dutch trading dominance began with the 15th century herring industry. Historically, the success of the herring fishing industry in the North Sea allowed the Dutch to trade herring to Baltic traders in exchange for grain (van Zanden 1993). Soon Baltic grain became an important commodity for the Dutch, particularly due to the poor soil of the Netherlands. Dutch merchants expanded this simple exchange to include other Western European countries in need of grain (Slicher Van Bath 1982). Over time, the grain trade with the Baltic became the "moedernegotie" or mother trade to the growing Dutch Republic (van Houtte 1977). Fifteenth century Dutch trade focused on herring, grain, and to a lesser extent, cloth, beer, and salt (van der Wee 1993). Geographically, Antwerp and Amsterdam were logical sites for Northern European entrepots. Antwerp flourished first as an entrepot for the Portuguese ships loaded with high-valued Asian goods (spices, silks, etc.), while Amsterdam served grain (rye and wheat) and herring interests in the Baltic region and to France, England, and Spain (Price 1974; Van Houtte 1977).[4] London and Hamburg were the main competitors, but lacked Dutch trading advantages. By the beginning of the 16th century, the Dutch provinces played a major role in trade for much of Europe.

Politically, the Low Countries were largely autonomous provinces of the Habsburg Empire, strongly influenced by the Protestant Reformation. That autonomy was threatened in the mid-16th century as the Spanish Habsburgs attempted to extend the Inquisition (Maland 1982; van Gelderen 1992). Increasing inflation, high taxation (Duplessis 1991; van Gelderen 1992; van der Wee 1993), and the Spanish crown's attempt to centralize authority (Hayes 1936; Palmer 1962; Huizinga 1968; Maland 1983) contributed to the revolt. After more than a decade of intermittent fighting, the seven northern provinces – Holland, Zeeland, Utrecht, Friesland, Groningen, Overijssel, and Gelderland – formed the Union of Utrecht in 1579, formally declaring their independence with the 1581 Act of Abjuration.

Although composed of a series of improvised defensive alliances, the United Provinces became a remarkably flexible and effective state apparatus (Schama 1987; Taylor 1994; Israel 1995). The proliferation of levies and dikes, which could be opened to flood the plains before advancing troops, turned the United Provinces into a national fortress. This, along with Dutch naval expertise, the privateering Sea Beggars, and alliance with England, kept Spain from recovering the northern provinces (Teitler 1973; Maland 1983; Taylor 1994). The Spanish focused attention on the southern provinces (now Belgium), ravaging Antwerp and systematically destroying its role as an entrepot. In 1582, Antwerp surrendered to the Spanish, and its trade shifted to Amsterdam (Van Houtte 1977; Rowen 1990). While Spain suffered bankruptcy and the 1588 British defeat of its Armada, the United Provinces prospered.

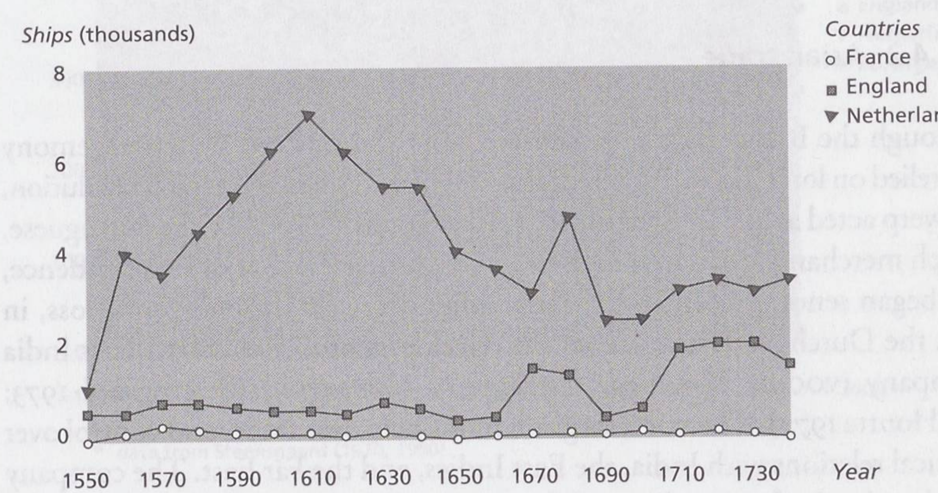
People from all over Europe emigrated to Amsterdam – particularly Protestants and Jews fleeing the Inquisition in Spain, France, and the southern provinces. Amsterdam's population quadrupled from 50,000 to 200,000 between 1600 and 1650 (Wallerstein 1980). Most beneficial to Dutch trade were the emigrants from Antwerp who brought customers, capital for new investments, and expertise (Van Houtte and Van Buyten 1977; Israel 1989; Davids 1995). Although Hamburg vied with Amsterdam to replace Antwerp's

position as entrepot, the Dutch state's orientation toward promoting commerce won Dutch predominance (Israel 1989; Taylor 1991).

Freed from Habsburg restrictions, Dutch traders replaced former competitors and expanded rapidly. Diversifying their trade beyond herring and grain, the Dutch shipped products from all of Europe, developing efficient trade networks, and making other nations dependent upon the Dutch for export revenues as well as goods from other countries (Van Houtte 1977). Dutch trade became so central to Europe that even during the War of Independence, the Spanish frequently dropped their embargo on the Dutch grain trade.[5] Because the Spanish paid for grain shipments with American silver, the Dutch gained control of much of the bullion flowing into Europe from the New World.

Figure 1 describes the number of eastbound ships that entered the Baltic Sound laden with goods from 1550 to 1749 for England, France, and the Netherlands (Bang and Korst 1906-1953, see Appendix A for description of the data). The Dutch dominated Baltic trade throughout this period, although it is clear that after about 1650 they lost what had been a near monopoly (except for a brief spike during the 1680s). This shift can be attributed to the effects of the Anglo-Dutch Wars on the Netherlands (discussed below), as well as the effects of competitors' gains in Baltic trade.

Figure 1 Baltic Trade



* data from Bang and Korst (1906-1953)

While Spanish control of the Strait of Gibraltar initially discouraged Dutch trade in the Mediterranean, late 16th century grain shortages and famine in Italy escalated profits enough for Dutch merchants to take their chances. By 1591 two hundred Dutch ships made the voyage to the Mediterranean yearly (Davies 1961). Spanish forces did not strike grain-laden ships providing famine relief, but they attacked Dutch ships on their return voyage. In 1607, a Dutch war fleet eliminated Spanish interference through the Strait, which remained open through the subsequent Twelve Years Truce reached with Spain in 1609 (Davies 1961).

Dutch success in Mediterranean trade resulted from Baltic trade dominance. The Dutch exchanged weapons, fur, fish, and grain with Italian wine, fruit, and oil, and even supplanted much of the long-dominant Italian textile industry with their own lesser quality, but much cheaper textiles (Davies 1961; Miskimin 1977; Van Houtte 1977). Southern Europe became dependent upon Baltic grain during the famine. Because the Thirty Years War (1618-1648) upset overland trade, Dutch shipping was strengthened (De Vries 1976; Van Houtte 1977). Trading networks were extended when, in 1612, the Dutch signed a treaty allowing access to ports in the Ottoman Empire. Israel (1989, p. 53) writes: "Together Baltic grain and Spanish silver placed the Dutch in an impregnable position throughout the Mediterranean for more than half a century." The Dutch were successful not only because they were efficient, but also because their state was oriented toward protecting and promoting commercial trade. For example, the state supported merchants pooling resources, and convoying ships, commercial innovations later utilized in the establishment of the Dutch East Indies and West Indies companies (van Houtte 1977; van Gelderen 1992; Bruijn 1993). The Netherlands was the first true "capitalist state".

4.2 Asian trade

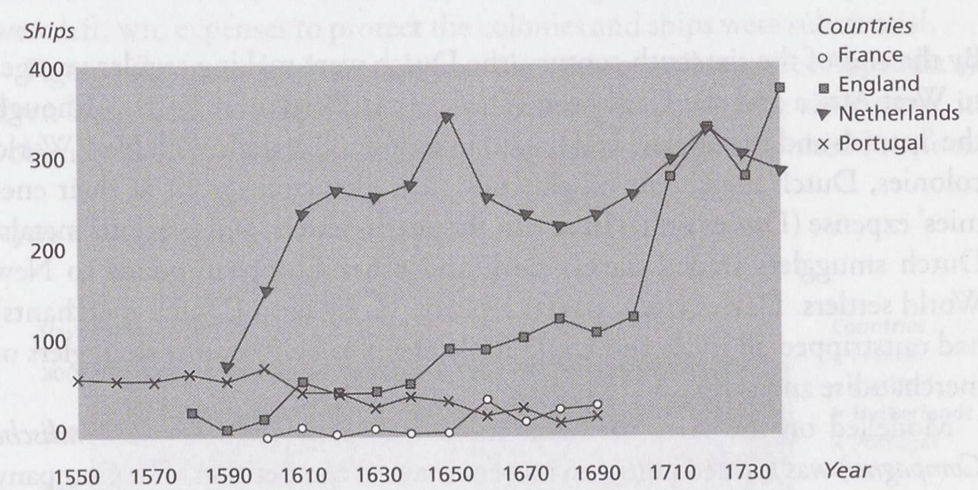
Although the Baltic trade was the most important factor, Dutch hegemony also relied on long-distance intercontinental trade. Before the Dutch revolution, Antwerp acted as an entrepot for East Asian goods shipped by the Portuguese. Dutch merchants lost access to these goods during the War of Independence, and began sending fleets to the East Indies. In order to limit profit-loss, in 1602 the Dutch state encouraged the development of the Dutch East India Company (VOC or *Vereenigde Oostindische Compagnie*) (Steensgaard 1973; Van Houtte 1977). The VOC was given monopoly over trade, and control over political relations with India, the East Indies, and the Far East. The company could maintain fleets and armed forces, establish colonies, erect forts, make treaties, and even declare war, but was focused primarily on *commercial*, rather than colonial interests (Maland 1983). In return, the States-General could assume control at any time (Ergang 1954; 't Hart 1995). The Company became a quasi-public body as "the state, in granting the charter, created the organizational preconditions for the accumulation of commercial capital" (Kriedte 1983, p. 85).

The Dutch sought to monopolize European trade with East Asia by first eliminating Portuguese shipping, and then forcibly persuading English

merchants that Asian trade would be unprofitable. Buffeted by their vast supplies of silver bullion and the Spanish conquest of Portugal in 1580, the Dutch defeated the Portuguese in East Asia (Miskimin 1977; Maddison 1989). Taking the Spice Islands in 1605, "the Dutch literally conquered their supremacy in the spice trade" (Israel 1989, p. 73). The Dutch also randomly attacked English ships in order to discourage the development of strong ties between England and East Asia (actions that later contributed to the Anglo-Dutch wars) (Ergang 1954; Davies 1961). Other European traders occasionally appeared, but did not merit the concern of the VOC.

Within thirty years, the Dutch were the dominant European traders in the Indonesian archipelago (Van Houtte 1977). Figure 2 provides a portrait of Asian shipping from 1550 until 1749 (Steensgaard 1970, 1990) (see Appendix A). By 1610, after they had effectively forced out the Portuguese, the Dutch were the predominant European traders in Asia until the 17th century when England begins a serious challenge. The Dutch lose their dominance over Asian trade by 1720.

Figure 2 Asian Trade



* data from Steensgaard (1970, 1990)

Although Dutch military superiority was initially key to forcing out other European competitors in the East Indies, the Dutch merchants were only able to dominate trade between Asia and Europe because they controlled silver from the New World via Spain. The Dutch had hoped also to engage in inter-Asian trade to reduce their export of gold and silver, the but they were unable to control or even much compete within the complex Asian trading networks. By setting up trading posts in the East Indies, India, Ceylon, Formosa, Japan, and South Africa, the Dutch were able to establish a profitable presence (Maddison 1989). The VOC inaugurated modern colonialism as capital investment, monopolizing the spice trade and burning surpluses (van Zanden 1993; Ergang 1954). The Dutch succeeded in expanding the networks established by the Portuguese to encompass other areas in Asia, and to redefine the European-Asian trade. While the "silk road" still carried 60-80 percent of Asian exports to Europe in 1600, they were insignificant by 1650 (Kriedte 1983).

Although only part of the total shipping undertaken by Dutch merchants, "the East India Company was nonetheless an essential factor in the extraordinary prosperity of the Dutch" (Van Houtte 1977, p. 200). Between the years of 1602 and 1798 the average dividend paid by the VOC was 18%, and during thirteen of those years the dividend was 40% or more (Kriedte 1983, p. 85).[6] The Company was the prototype, mimicked successfully by the British and French, for expanding colonial capitalism. Through the trade generated by the VOC, Amsterdam became the most important European market of the seventeenth century (Smith 1991).

4.3 Atlantic trade

By the end of the sixteenth century, the Dutch were making regular voyages to West Africa and the Caribbean (Davies 1961; Miskimin 1977). Although the Spanish and Portuguese had hoped to monopolize trade with New World colonies, Dutch merchants quickly saw their chance to profit at their enemies' expense (Davies 1961). In return for pearls, jewels, and precious metals, Dutch smugglers traded slaves, cloth and other European goods to New World settlers. Davies (1961, p. 113) reports, "... by 1609 [Dutch merchants] had outstripped all rivals and could fairly claim to be foremost smugglers of merchandise and slaves in the Indies."

Modelled on the VOC, the West India Company (WIC or *West-Indische Compagnie*) was formed in 1621 to prevent internal competition. The Company was given an exclusive right to trade in West Africa and the Americas (Ergang 1954), and authorization to maintain fleets and armed forces, establish Dutch colonies, exercise administrative and judicial powers, and to declare war (Rawley 1981; 't Hart 1995). However, its chief business was to smuggle goods to the existing colonies, raid Spanish ships, and obtain a share of the slave trade. Initially limited to West African trade, the main goal of the WIC was capturing trade with the Americas by attacking Spanish and Portuguese ships and colonies (Davies 1961; Van Houtte 1977; Israel 1989). The Dutch developed new sugar exporting colonies after capturing several Portuguese plantations and coastal territories in Brazil, leading to an increased role in both the slave trade (necessary

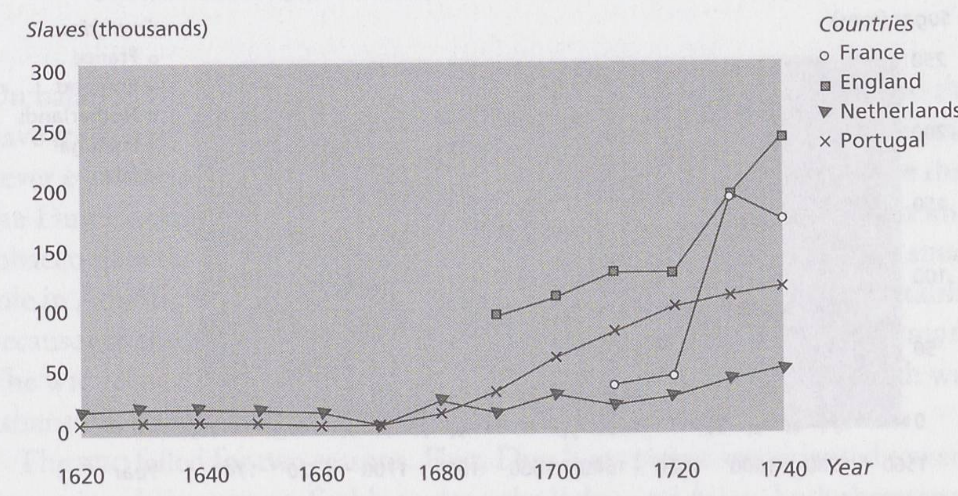
for profiting from sugar) and sugar processing (Van Houtte 1977; Postma 1990).

The Portuguese had controlled the slave trade in the Americas for almost 150 years when the Dutch began challenging their monopoly in the early 1600s (Rawley 1981). Initially, the Dutch morally avoided engaging in the slave trade. In 1596, when a ship full of slaves was brought to Middelburg for sale, the city council ordered all the slaves released and vowed that there would be no "slave market" in Middelburg (Postma 1990). Yet soon afterwards the Dutch entered the highly profitable slave trade (Davies 1961; Van Houtte and van Buyten 1977).

Beginning with the 1637 conquest of Portugal's stronghold of Elmira, the Dutch gained possession of almost all important West African slave-trading posts by 1642. Because sugar plantations were dependent upon slave labour, as long as the sugar trade remained profitable, so did the slave trade (Davies 1961; Miskimin 1977). By mid-century the "English, French, and Spanish were buying slaves not from the Portuguese, but from the Dutch and at prices fixed by the Netherlands" (Davies 1961, p. 117). Yet the WIC's peak was to be a brief one. Soon after the Portuguese regained independence from Spain in 1640, they regained both sugar plantations in Brazil and slave-trading colonies on the coast of West Africa (Van Houtte 1977). Although a few Caribbean plantations were left, WIC expenses to protect the colonies and ships were substantial.

Figure 3 illustrates the slave trade from about 1620 until 1749 (See Appendix A). Even after the Dutch had lost their foremost position in the slave trade, its volume was still remarkable in light of the small size of the United Provinces

Figure 3 Slave Trade



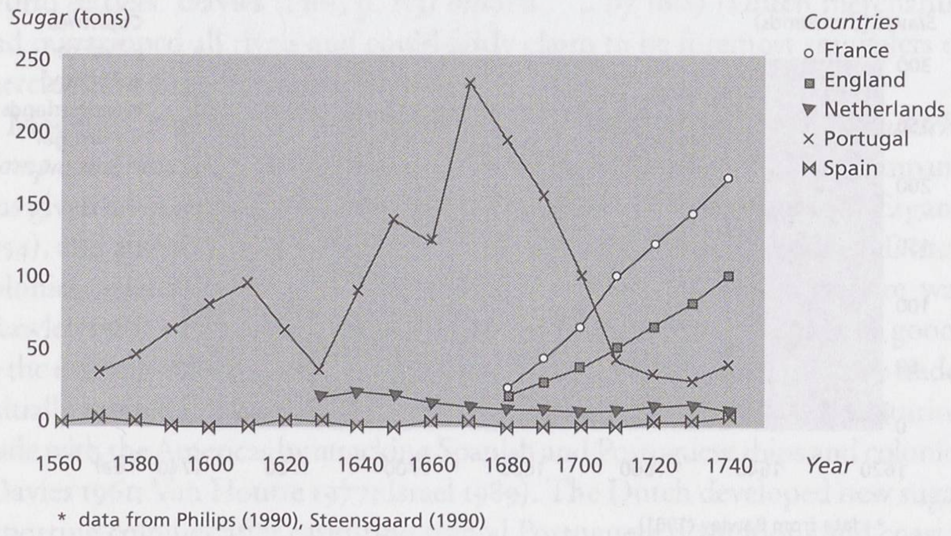
* data from Rawley (1981)

and its few colonies in the New World (Rawley 1981). In addition, because the United Provinces was the financial centre of the European world economy, Amsterdam long remained the business headquarters of the slave trade (Barbour 1963). By the 1640s, the English eclipsed the Dutch and by the beginning of the eighteenth century, the Dutch fell to third place behind both the Portuguese and the British in the slave trade.

While the slave trade was a profitable part of Atlantic trade, the sugar and tobacco trades also became integral to the European world economy. Steensgaard (1990, p. 131) remarks that sugar and tobacco "overshadowed everything else in the imports to Europe from America", composing 75% of English imports before the mid-eighteenth century. The Dutch first participated in the sugar trade by distributing Portuguese production, then by controlling Portuguese sugar growers (through the 1640s), then refining sugar (through the 1660s). However, the Dutch sugar industry, like the slave trade, was short-lived.

Even during Dutch control over Brazil, the Portuguese dominated the sugar trade. Figure 4 shows the tons of Atlantic sugar that Spain, Portugal, the Netherlands, England, and France shipped between 1560 and 1749. (See Appendix A.) This figure shows that the Portuguese were the strongest traders in sugar until about 1700. The Dutch, while stronger than Spain throughout the period, lagged far behind Portugal. England and France show a strong increase between the 1680s and 1740s.

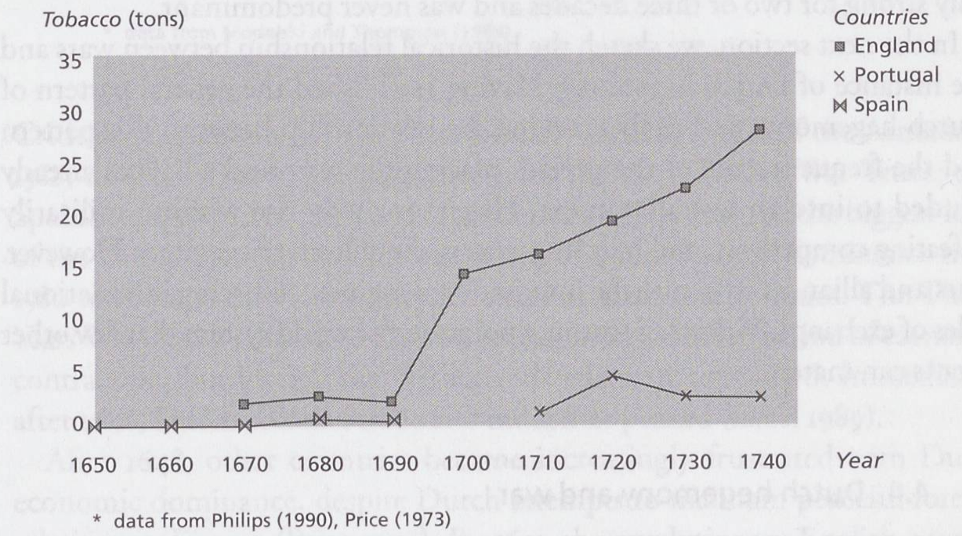
Figure 4 Sugar Trade



In 1614, the Dutch Republic established the colonies of New Netherlands (New York) and New Amsterdam (Manhattan) in North America (Ergang 1954). These colonies were unsuccessful for the WIC, and by 1664 the English captured the region. Unable to maintain a strong presence in North America, the Dutch were not able to capitalize on the profitable tobacco trade, although they did operate a number of tobacco processing plants.

Figure 5 shows the development of the Atlantic tobacco trade between 1650 and 1749 (Philips 1990; Price 1973). While Portugal and Spain both traded tobacco during this period, neither came close to matching the sheer volume that England carried from the Chesapeake colonies.

Figure 5 Tobacco Trade



On balance, the Dutch did not fare well in the Atlantic. They controlled the slave trade only briefly, never matched the Portuguese in the sugar trade, and never even formally entered the tobacco trade. While it is probably true that the Dutch smuggled many more slaves and many more tons of sugar and tobacco than the official records show, these records are indicative of their small role in Atlantic trade. The West Indies Company was never very profitable, because expenses for maintaining fleets and armies were too high (Smith 1991). The WIC relied on income from pirateering, and once its military strength was exhausted, it required government subsidies to survive (Postma 1990).

The WIC failed for two reasons. First, Dutch sea power was oriented toward protecting their most profitable trades – the Baltic and Asian, both threatened by Sweden and Britain respectively in the late 16th century. Because the Dutch government was more interested in the immediate and large return provided by the VOC, it never fully supported the WIC (Ergang 1954; Davies 1961). Asian and American traders' strategic pro-war alliance of 1621 was dissolved as the VOC secured a hegemonic position and allied instead with the defensive Baltic traders (Adams 1994, 1996). Second, the Dutch were relatively poor at establishing settler colonies. Few citizens were interested in emigrating, because during this Dutch "golden age", the Netherlands was the cultural capital of Europe, with citizens enjoying religious freedom, political autonomy, high wages, and access to trade goods from throughout the world (Davies 1961; Postma 1990).

Overall, there is a clear pattern in Dutch trading. The Dutch triumphed in Europe, initially due to their access to Baltic grain, and later due to their function in shipping exports from country to country. The VOC was also highly successful. The Dutch eliminated the Portuguese and achieved relationships with Asian traders chiefly through their supply of precious metals. However, in the West Indies and the Americas, the Dutch West Indies Company was only strong for two or three decades and was never predominant.

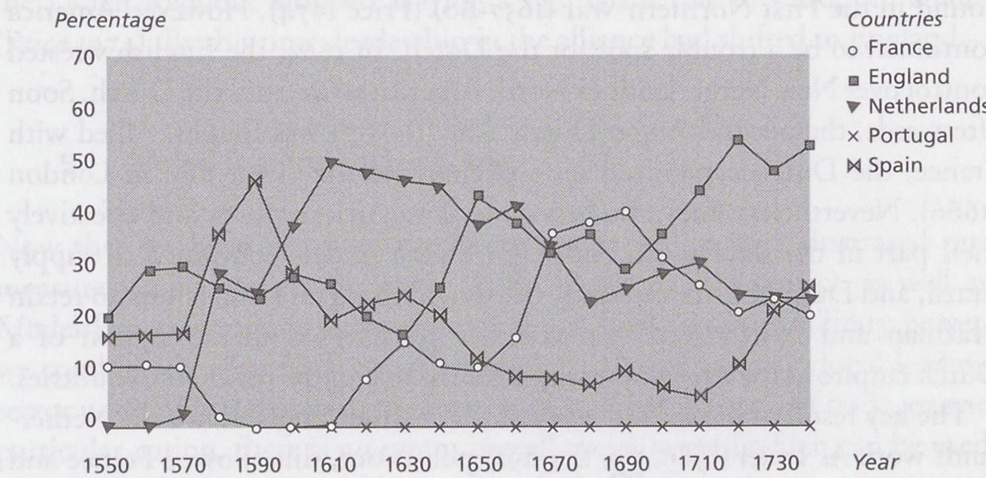
In the next section, we sketch the historical relationship between wars and the instance of Dutch hegemony. Having established the general pattern of Dutch hegemony, we briefly examine the relationship between this pattern and the frequent wars of the period, placing the wars and alliances already alluded to into an overall context. Hegemons may rise without militarily defeating competitors, and may lose wars without losing hegemony. However, wars and alliances structure the international regime, enforcing international rules of exchange. Wars mark turning points in the world system that few other events can match.

4.4 Dutch hegemony and war

In Table 1, we presented a brief chronology of Dutch military history, including wars. The wars listed in boldface on the table are ones Levy (1983, 1985) considers global wars; those where potential hegemony was at stake. Europe was almost continuously at war during this period (Parker 1979). Until 1648, the United Provinces were allied with England and France in wars against Habsburg/Spanish imperial ambitions. The next forty years saw shifting Anglo-French alliances against the Dutch, ended in 1688 by an Anglo-Dutch alliance against French continental expansion.

Figure 6 shows the percentage of sea power, measured by warships, controlled by global leaders for this period (compiled by Modelski and Thompson [1988]). According to Modelski and Thompson (1988), leadership can be claimed when one nation controls 50% of the sea power or a 2-to-1 ratio of sea power. This measure suggests that the Dutch were leaders in 1608-19, 1624, 1632-33, 1635-36, and 1640-42.

Figure 6 Percentage of sea power



* data from Modelski and Thompson (1988)

Critical moments in the Dutch revolution include defeat of the Armada in 1588; de facto Dutch independence with the 1609 Twelve War Truce; and Spain's recognition of Dutch independence in 1648. Perhaps the biggest loser of the Dutch-Spanish conflict was Portugal, under Spanish dominance from 1580 to 1640, as the Dutch stripped away its trade and colonies. The Thirty Years War devastated central Europe, issuing in an extended period of economic contraction, but leaving the Netherlands relatively unscathed. Immediately after 1648, Dutch colonial trade and industries peaked (Israel 1989).

After 1648, other countries became increasingly frustrated with Dutch economic dominance, despite Dutch attempts to maintain peaceful foreign relations in Europe (Price 1974). By 1651, the revolutionary English government put its first "Navigation Act" in place, aimed strictly at reducing Dutch share in English shipping and trade through levying tariffs and forbidding intermediary carriers to carry English imports (Israel 1989). Three Anglo-Dutch Wars followed, fought explicitly over trade, industry, colonies, and fishing rights (Price 1974; Israel 1988). Although near its economic zenith, the Dutch loss over the rules of global trade ("free trade" versus protectionism) demonstrates a surprising weakness.

The First Anglo-Dutch War (1652-55) was a defeat for the Dutch in the North Sea, but the English were unable to profit from their victory. At the same time, Dutch slave and sugar traders suffered a defeat of major commercial importance when the Netherlands failed to suppress the uprising of Portuguese colonists in Brazil in 1654. War with Portugal (1657-61) failed to regain the Brazilian colonies and the Netherlands renounced their claim. Dutch global reach was more successful in protecting New Amsterdam from Sweden (1647-

1655), but not in deterring the attempt. In alliance with Denmark, the Netherlands successfully kept Sweden from gaining control of the Baltic Sound in the First Northern War (1657-60) (Price 1974). However, America continued to be a trouble spot for the Dutch. In 1664, the English wrested control over New Netherlands in North America away from the Dutch. Soon afterwards, the Second Anglo-Dutch War (1665-7) was fought. Allied with France, the Dutch capitalized on a plague and the Great Fire in London (1666). Nevertheless, they also lost some West African ports, and effectively their part in the slave trade. Although Dutch traders continued to supply Brazil, and Dutch Caribbean trade continued to expand, the failure to retain Brazilian and North American colonies pre-empted the formation of a Dutch empire in the Americas comparable to that of the other core countries.

The key result of the second war was that neither England nor the Netherlands won. As Israel (1989, pp. 275-291) points out, this allowed France and Sweden to launch "guerre de commerce" against the Dutch without fear of England benefiting. At its zenith, Dutch superior efficiency and market access meant that competitors lost more than they gained when they imposed tariffs against Dutch commerce. By 1667, France, Sweden, England, and Portugal all maintained mercantilist policies against the Netherlands. The Dutch Republic's lower relative taxation "obstructed them in the financing of their navy" ('t Hart 1995, p. 84). In long-cycle terms, wars with England, Sweden, and Portugal, although militarily inconclusive, challenged Dutch world leadership, replacing it with traditional balance of power world politics. The wars also stripped away much of the Netherlands' global reach over the key leading sector trade in the Americas. The Portuguese, French, and especially the British almost immediately began to slice away at the Dutch trading hegemony.

Although allied with the Dutch during the Second Anglo-Dutch War, the French changed sides as they sought to expand their commercial/colonial empire. With Britain and France secretly allied, the Third Anglo-Dutch War (1672-4) and the Franco-Dutch War (1672-78) were outright attempts to finally crush the Netherlands. While war with England was crippling, war with France proved even more disastrous due to Dutch trade interdependence with France (Israel 1989). Parliamentary and Protestant opposition forced a British withdrawal in 1674, but France continued the war until 1678.

Alliances shifted again when the English Glorious Revolution of 1688 made William III joint regent with wife Mary of England (until 1702). In a classic "balance of power" war, much of Europe joined William's war of the "League of Augsburg" (1688-97) that checked France's attempt at continental expansion – a reoccurring theme of European wars until 1815. Unfortunately for the Dutch, the war was both expensive and largely inconclusive. The War of Spanish Succession, which prevented Louis XIV from placing his grandson on

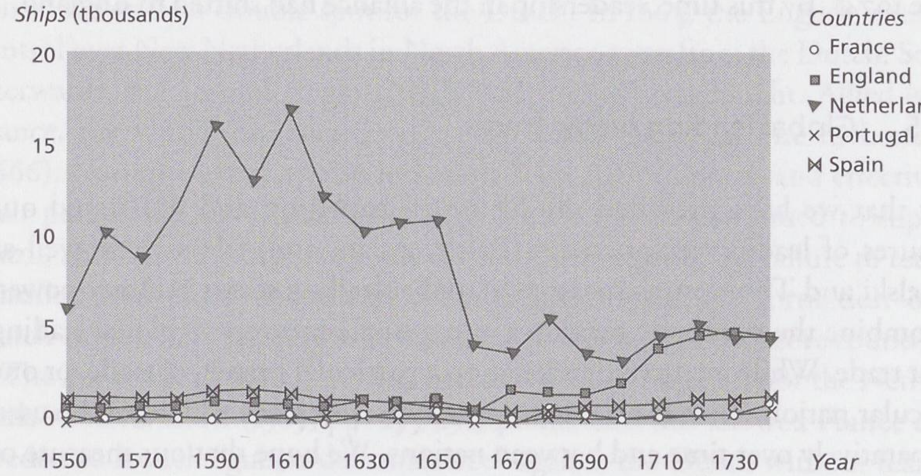
Spanish crown, was devastating to the Netherlands, exhausting the Netherlands of its status even as a great power by its conclusion in 1713. After 1715, the Dutch Republic stopped playing a significant role in European affairs (Price 1974). By this time, leadership in the alliance had shifted to England.

5 Global leading sector trade

Now that we have provided the historical backdrop and illustrated our measures of leading sector trades (Baltic, Asian, and Atlantic), as well as Modelski and Thompson's measure of global leading sector military power, we combine the economic measures into a single measure of global leading sector trade. While many studies focus on a particular branch of trade, or one particular nation, there is no extant overall measurement which can be used comparatively over time and between nations. We hope that our measure of global leading sector trade will provide a foundation for other researchers in this area. We do not argue that our measure fully represents trading patterns during this period, but we believe that it is thorough enough to serve as an indicator of these patterns.

We combined our measures of Baltic, Asian, and Atlantic trades using the common denominator of ship passages (see Appendix A for a more detailed account of this measure's construction). Our measures of trade were confined to the great powers of the European world economy of this period: England, France, the Netherlands, Spain, and Portugal. However, we include all countries involved in the Baltic trade (not just the five great powers) in the denominator for this measure. The Baltic, Scandinavian, and Germanic (Holy Roman Empire) countries had large shares of the Baltic trade. In the Asian and Atlantic trades used to compose our trade measures, only the five countries we included in our analysis controlled large shares of European trade. If we did not include the other Baltic traders in the denominator of this measure, the Dutch would be greatly over-represented. By using ship passages as a common denominator, we are able to assess the relative contribution of different trades to Dutch hegemony. Our data also allow us to examine the relative influence of leading sectors over time. After converting our trade data into ship passages, all of our measures could be combined into a single indicator composed of Baltic, Asian, and Seville-Atlanta ship passages, numbers of slaves converted to ship passages, and amounts of sugar and tobacco converted to ship passages. (See Appendix B for a figure describing the Seville-Atlantic trade.) Figure 7 shows our overall measure, which has clearly been influenced by our measure for the Baltic, since such high numbers of ships were involved in this trade.

Figure 7 Global leading sector trade



Having constructed a unified measure of leading sector trade, we can now evaluate whether the Netherlands sufficiently dominated trade to be considered hegemonic. We do this by checking whether the Dutch during this period meet two thresholds for a quantitative measurement of hegemony – 50% of trade, and a two-to-one ratio over its nearest competitor. Since we are also interested in the relationship between military and economic power, we also directly examine the correspondence of economic hegemony with Modelski and Thompson's (1988) measure of military hegemony.

Figure 8 Dutch percentages of leading sector trade and seapower

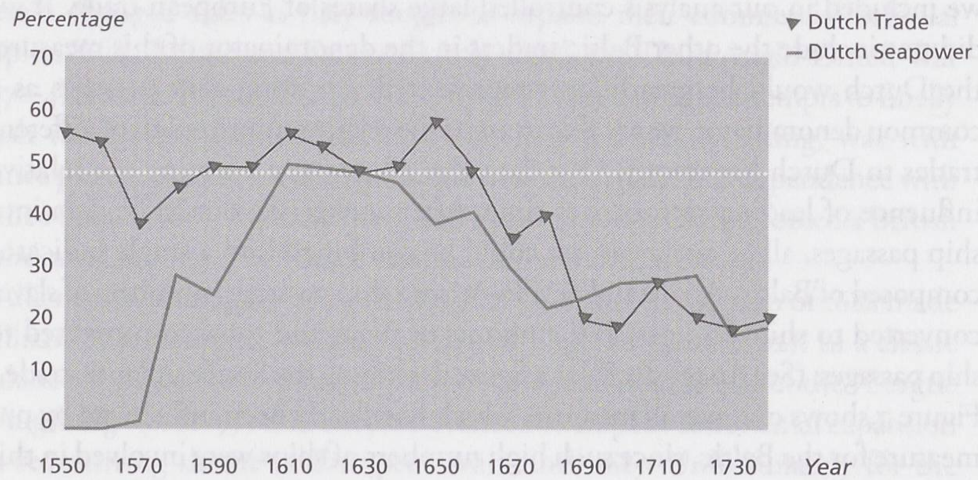


Figure 8 presents the proportions of overall trade and sea power controlled by the Netherlands. The Netherlands surpasses a 50% threshold for trade far longer than for sea power. Dutch shipping rises above the threshold between 1600 and 1609, drops slightly between 1640 and 1649, and peaks between 1650 and 1659, after which it declines rapidly, falling decisively below 50% between 1670 and 1679.

While there is also a clear rise and decline for the measure of sea power, the Dutch are only above 50% between about 1610 and 1640. In this case, military power declined before economic power waned. Dutch sea power mirrors the trade measure, but then drops dramatically with the end of the Thirty Years War. There is an interesting relationship between sea power and trade during the periods from about 1640-1660 and 1670-1690. Sea power seems to dip exactly at the same times as trade increases. This can be explained in part by the fact that the Dutch used merchant ships in their navy during times of war. When the ships were no longer needed, they would go back to shipping goods (Modelski and Thompson 1988).

Figure 9 Ratio of Dutch ships to nearest competitor

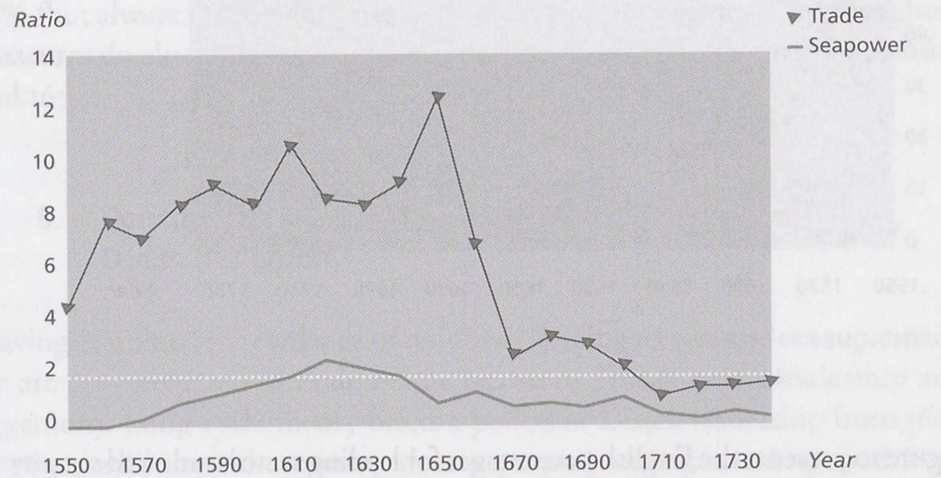


Figure 9 shows the ratio of Dutch ships to their nearest competitor for both trade and sea power. The measure is the number of Dutch ship passages divided by the number of ship passages of their nearest competitor, which varies over time. At some points, one or more competitors actually has more passages than the Dutch – in which case the ratio drops below one. We argue that hegemony is only clearly achieved when the ratio is two or more. For trade, the Netherlands' nearest competitors (or highest competitors) are Spain (1550-

1629, 1650-1669) and England (1630-49, 1670-1749). For sea power, the nearest competitors (or highest competitors) are Portugal (1550-79), Spain (1580-89, 1620-39), England (1590-1619, 1640-69, 1700-49), and France (1670-99).

The ratio figure illustrates the rise and decline of Dutch hegemony most dramatically. The Netherlands is the leading trader until 1710, when it is surpassed by the English. It meets the threshold of a ratio of two-to-one from 1550 until 1700, although just barely after 1660 (and highly influenced by the Baltic trade). From a high ratio of almost 13-to-1 in 1650 Dutch trade plummets to just below 3-to-1 in 1670. The sea power ratio is interesting in that it shows that the Netherlands was more rarely the leading naval power (only between 1590-1649, 1660-69), and only holding a two-to-one ratio between about 1610 and 1649.

Figure 10 British percentages of leading sector trade and seapower

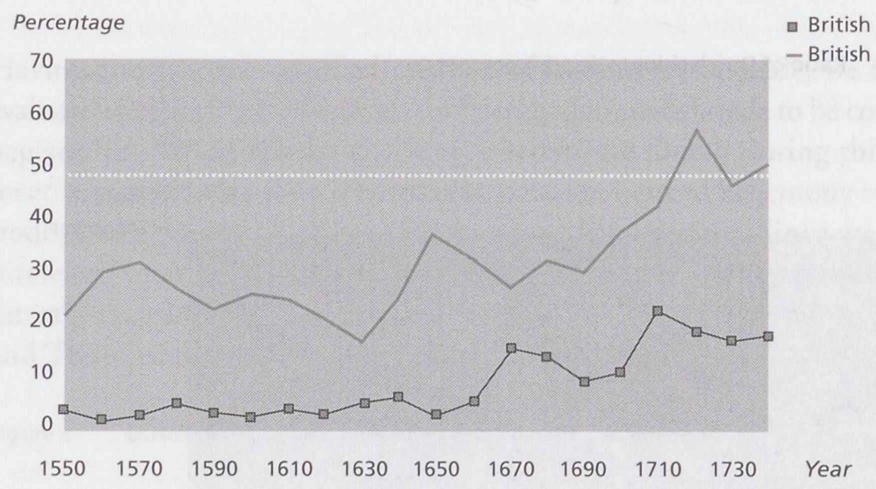


Figure 10 presents the English percentages for leading sector trade and sea power. England was the United Provinces' closest competitor during the late seventeenth and early eighteenth century, and eventually surpassed the Dutch. Here the relationship between sea power and trade is reversed, with sea power consistently stronger than trade. A key to the difference is that England was expanding its sea power to gain rather than protect its trade. During the early eighteenth century there is a brief peak over 50% for British sea power. Modelski and Thompson (1988) take this to mean that there was an early English leadership. However, England clearly did not dominate trade by our measures, and therefore did not translate its military lead into hegemony over the world economy for this period. If we were to drop Baltic trade as a measure

in 1670, as Modelski and Thompson (1994) do, we would find the British predominating over the colonial trades. Yet even here, the British never achieve a 2:1 ratio, but instead share a rise with the French, both nations competing to capture the trade left by the declining Dutch hegemon. Nevertheless, the British political-military expansion, especially the colonial expansion, was critical for establishing the markets for British hegemony in the 19th century. Taken side by side, figures 8 and 9 show the rise and fall of one hegemon, and the beginning of the gradual rise of the next.

We also calculated the Dutch proportion of trade, and the ratio of Dutch trade to its nearest competitor using slightly different figures. Because the trade to Asia and the Atlantic was much more valuable than the Baltic trade (Israel 1989, p. 77), and the voyages were longer and entailed exchanges in more ports, we weighted ships passages. We weighted passages from Asia three times, and ships passages from the Atlantic two times. This estimate is based on a report of interest from loans to finance ships being twice as high for West Africa and the Caribbean as for the Baltic (Israel 1989, p. 77). Because Asian voyages included a West African stop, we weighted Asian trade three times to account for the extra distance/risk. Using these measures, Dutch trade strength is slightly lessened, but Dutch hegemony still appears to occur between about 1610 and 1669, although the proportions do dip slightly below 50% (but always remain above 45%) for some of this period. These weighted measures do elucidate a more radical decline for the Dutch during the 1660s and 1670s.

6. Conclusions: evaluating theoretical claims about Dutch hegemony

Having examined the evidence of economic leading sectors and sea supremacy, we are now prepared to evaluate the claims of Dutch world leadership and hegemony. Long-cycle theory offers a period of Dutch leadership from 1609 to 1640, while world-economy theory purports a hegemonic period from 1625 to 1672. The difference in the two dates are greater than the overlap. In addition, both theories suggest that during a peak a leader or hegemon will use its power to suppress any major wars that might challenge its position. The Thirty Years War (1618-1648), one of Europe's bloodiest contests, challenges the claims of both theories for the Dutch case.

In terms of leading sectors, the case for Dutch predominance is supported by our measures and extends well beyond the domination of the Baltic trade found in our previous research (Boswell, Misra, and Brueggemann 1991). As maritime trade led capital accumulation prior to the industrial revolution, we have argued that the Baltic, Asian and Atlantic trades were the leading sectors from 1500-1750. At its peak, Dutch economic predominance extended throughout the European-centered world system.

The Netherlands held more than both a 50 percent share and a 2:1 ratio over its nearest competitor from the decade of 1610-19 through the decade of 1660-69, as illustrated in figures 8 and 9. In examining the trade measures found in these figures, we can discern the following four phases: (1) ascent beginning in the 1570s and peaking in the 1600s; (2) relative decline and flattening out until the 1640s; (3) resurgence starting the 1640s and peaking in the 1650s; and (4) rapid decline thereafter until the 1700s. In terms of global military reach, there is a corresponding dominance for the period of 1610s-1640s, with a rather steep ascent prior and a somewhat slower decline after. What is the theoretical relevance of these phases? We will address three issues, concerning world leadership, major wars, and hegemony.

The first issue is straightforward. In both economic and military terms, the Netherlands was the world leader for the 1610s-1640s. Our data and reading of history matches Modelski and Thompson's (1988) claim for world leadership beginning in 1609 when the Dutch achieve de facto victory over Spanish claims to dominion. This is a much clearer starting point than Wallerstein's "victory" in 1625, which is 16 years after de facto military victory and twenty three years short of de jure victory.

The difference between de facto and de jure victory helps explain the relationship between leadership and war for the Dutch case. Agreeing to a twelve year truce in 1609 not only secured independence, but allowed the Dutch to consolidate their economic leadership. Relatively safeguarded from the ongoing ravages of the land war among the Germanic states, the Dutch mariners maintained their hugely profitable near monopoly of the Baltic trade and expanded into the colonial trades. In this sense, Dutch world leadership did deter their own active involvement in a major war for an extended period, although it did not achieve an overall peace. Nor did their resumption of war result from a relative decline and challenge from rising competitors, as the theories might expect. While the ruling families most closely associated with the Baltic trade opposed the resumption of conflict when the truce expired in 1621, the families dominating the Asian and American trades sought the chance to expand their imperial dominance at the expense of Spain, and especially Portugal (Adams 1994, 1996). The latter coalition was victorious.

The third, and most difficult, issue, is at what point does economic and military world leadership translate into global hegemony? While economic and military predominance is a prerequisite for hegemony, it is not a guarantee. To be sure, one cannot pinpoint hegemony in any case – the concept is not meant to be applied so literally. No one ordains the hegemon, nor does any country explicitly claim the title.

One way to understand the resumption of war in 1621 was as a bid for hegemony. Victory in 1648 brought consolidation of Dutch predominance over the Asian trade and control over former Portuguese colonies in West Africa and Brazil. More importantly, Westphalia inscribed the rules for a new world order of national states, replacing the prior dynastic world order and its rules of interstate relations. To be sure, rulers continued to create alliances by marriage and invoke allegiance to person rather than nation. But as Tilly (1990) points out, they did so increasingly in military competition with states that could muster a national army and draw on the wealth of a commercial empire, and thus they did so increasingly at their folly. The Netherlands was best suited to play by the new rules of the international state system, rules they helped define. Next best was their revolutionary emulator, Cromwell's Britain, followed not long after by Colbert's France.

Dutch hegemony thus does not begin until 1648 according to our evaluation of the evidence and understanding of the concept. Hegemony required a prior period of world leadership, followed by a subsequent expansion of economic predominance. It also resulted from a global war, in which the hegemon was mainly the major victor because it was the least defeated or destroyed, and because it expanded at the expense of others.

Decline begins immediately in relative comparison, as the Dutch demobilize, the defeated rebuild, and most importantly, wartime allies England and France become commercial competitors. The competition, however, enforced the rules of the international state system. When decline passes into an end of hegemony is less clear. As Wallerstein suggests, it is surely over by 1672 when the French invade. But perhaps hegemony ended before this defeat, making the defeat more likely. Although a less obvious symbol, we suggest that 1667 is a key shifting point. In a second Anglo-Dutch war the Dutch did not exactly lose or win, but nevertheless lost their North American colonies to Britain. This followed a perhaps even greater final loss of South American colonies back to Portugal in 1661. As the American plantations and the Atlantic trade represented the fastest growing leading economic sectors, the Dutch could only decline.

Our estimation of Dutch hegemony is much shorter than Wallerstein's. Yet the Dutch case closely parallels that of the United States, the most easily recognized hegemon. Following World War I, the US was the world leader in economic share and at least then existing military power, yet it did not turn that leadership into hegemony until after World War II ended in 1945. Like the Dutch, the US enjoyed a period of peace following war aided ascension to world leadership, while parts of Europe and Asia continued old or started new conflicts. US hegemony came after a prior leadership and after winning a global war. Like the Anglo-Dutch wars, the US faced a revolutionary adversary in a series of largely indecisive conflicts, fought in part over who would dominate the periphery. Most date the end of US hegemony to 1974, when the US withdrew from the last of such wars, although the decline started immediately after ascension as the defeated rebuilt and as its allies became competitors. There are, of course, also significant historical differences and even greater differences with British hegemony. What is most important for world-system theory is that the contentions over dates and apparent anomaly of major wars are resolved in the Dutch case once concepts of leadership and hegemony are rigorously defined and the empirical evidence is carefully compared.

Dutch hegemony is a remarkable case: the United Provinces rose to a position of power and strength even while involved in their war of independence against Spain. Although Dutch hegemony has been recognized in the world-system literature, there has been a dearth of supporting economic evidence that could be used to its rise and decline. Steensgaard (1990, p. 102) has commented, "more details and better statistical information have been uncovered, but ... today we are not much closer to a comprehensive understanding of the economic interrelations between the continents in the early modern period than we were twenty-five years ago." Previous research on hegemony has utilized systematic quantitative economic and military data to substantiate the claims of global leadership for leaders during the 18th, 19th, and 20th centuries. By relying on these well-substantiated but later cases of hegemony to develop a theory of hegemony, important conceptual elements of hegemony have been lost. The nature of hegemony changes over time – and we suggest that the mercantilist period was substantially different from the period after the industrial revolution. By providing this detailed charting of Dutch economic predominance, and relating the Dutch case to the theoretical arguments which have been made, we hope that our research begins to address some of the questions the early modern period raises for our conceptualizations of hegemony.

Notes

The authors wish to acknowledge the comments and criticisms of Julia Adams, Cliff Brown, John Brueggemann, Christopher Chase-Dunn, Andre Gunder Frank, Ivy Kennelly, Frank Lechner, Rick Rubinson, Art Stinchcombe, and Bill Thompson.

1. Wallerstein (1984) argues that the 17th century Dutch, 19th century British, and 20th century Americans are the only cases of hegemony in the European capitalist world-system, while Modelski and Thompson's (1994) cases of world leadership acknowledge these cases as well as the 16th century Portuguese and 18th century British leaderships.

2. Emphasizing the *cyclical* nature of global leadership, Modelski and Thompson (1994) suggest that the delegitimation period of one global leader coincides with the expansion and agenda-setting of the next leader, in this case the British.

3. We exclude periods of rising and declining status, as these periods are, by definition, under dispute.

4. Limm (1989, p. 11) suggests that Antwerp originally handled 75% of Dutch trade.

5. Maland (1983) agrees that during the first half of the seventeenth century, the Dutch were on better trading terms with the Spanish than the British.

6. Yet it is important to keep in mind the importance of Baltic trade in comparison to East Asian trade. Price (1974, p. 54) argues: "In terms of tonnage the cargoes carried by the ships of the VOC were insignificant compared to the total tonnage passing through the parts of the Republic, and even though it was concerned with very valuable items, the trade of the company before the eighteenth century never accounted for more than about 9 or 10 percent of the total value of the trade of the Republic. Certainly a number of individuals waxed fat on their profits from the VOC, but the company employed relatively few ships, accounted for only a small fraction of the total value of Dutch trade..."

7. We would have preferred to use comparable net trading values for the goods shipped in these trades as the denominator instead of ship passages, but this data is not available during this period.

8. In keeping with the concept of a "leading sector", we reflect the fact that the highest value components of the Baltic trade shift over time from East to West by measuring all Baltic trade prior to 1650, but only eastbound laden trade thereafter for this overall measure (see Appendix A for further details).

Appendix A

Baltic Trade

Source: Bang and Korst (1906-1953)
The data for the Baltic comes from the Baltic Sound Tolls, which is a record of the number and nationality of ships passing through the Baltic Sound every year between 1497 and 1763 (Bang and Korst 1906-53). (See Boswell et al. 1991 for more detailed information.) Data was tallied for ten-year periods (i.e., 1550-59, 1560-69) since other data used was only available in these periods. Prior to 1650, we include all ships. After 1650, we include only eastbound ships that sailed laden with goods in our analysis. Because low-value-added Baltic goods (grain, hem, flax, tar) came from the east, ships sailing eastbound were laden with industrial and processed West European goods, and highly valuable colonial goods. By including only these ships, we utilize a conservative standard of Baltic trade, and one which measures the shift in value to West European and colonial product trade with the Baltics.

Data was missing for the years 1550-56, 1559, 1561, 1570-73, 1632, 1634, and 1658-1660. We interpolated for all years except 1550-56. Because data before 1550 did not provide separate numbers of east and westbound ships, we were forced to extrapolate this data from the data for 1557-58. In 1650-53, the number of eastbound Dutch ships is available, but not the amount laden. We calculated the average percent laden of eastbound Dutch ships from 1649 and 1651 (42%), then took this percent of the eastbound ships for the missing years.

In 1645, the Dutch fleet forced open the Sound, which had been closed as a wartime measure, allowing 1633 Dutch ships to pass without paying the toll (in addition to 59 which had paid, see Faber 1963; Van Houtte 1977). We can estimate that about half of these untaxed ships were eastbound, and of the eastbound, that 51% were laden, for a total of 419. The percent laden was calculated as the average percent laden of eastbound Dutch ships in 1644 and 1646. Another 20 laden ships had paid the toll, for a grand total of 439, which is slightly lower than surrounding years.

Asian Trade

Source: Steensgaard (1970, 1990)
The data for European shipping to East Asia was collected by Niels Steensgaard (1970,1990). For the period from 1490 until 1700, he measured outward-

bound European shipping to Asia by piecing together national and company records for the countries in question. From the period starting after 1640, Steensgaard (1990) provides the sales value of all goods imported from Asia for England and the Netherlands. Because the two data sets overlap between 1640 and 1700, we were able to convert the value of goods into number of ships for the period of 1700-1749. This leaves us without comparable data for France and Portugal after 1700. However, since Asian trade was monopolized by the Dutch and then the English after 1600, we believe this is not a serious omission. Steensgaard provided his measures in ten-year periods, for both ships and value OGOF ODS.

Slave Trade

Source: Rawley (1981)
The data is from Rawley's (1981) revision of the slave trade data gathered by Philip Curtin (1969). This revision takes into account much of the criticism levied against Curtin (Inikori 1976; Anstey 1977). Curtin's data was presented in terms of numbers of slaves. We converted his data into ship passages by estimating the number of slaves held per ship of each state.

Seville-Atlantic Trade

Source: Chaunu and Chaunu (1956, Vol 6., Table 12)
This measure of the Seville to Atlantic trade reflects Spain's ship passages to the Americas between 1504-1650. We continued this data until 1749 by reporting the number of passages for the last decade of information as remaining stable for the next century. Although the Seville trade was declining, Spain continued its trade with the Americas, shifting its main port to Cadiz.

Sugar Trade

Sources: Philips (1990) for Portugal, Spain, Netherlands (1631-49) and Steensgaard (1990) for England, France, Netherlands (1701-1749)
The data for sugar trade came from two sources – Philips (1990) and Steensgaard (1990). Because there was no data for the Dutch between 1650 and 1700, we interpolated between the Philips data and the Steensgaard data. The data for England and France are least reliable, as they are culled from measures of sugar production provided for the 1680s and the 1750s in Steensgaard (1990). We interpolated for the data between 1690 and 1749. While sugar

production is not a good alternative for sugar trade, we could not find any better measures and so chose to include this data.
We estimated ship passages from the amounts of sugar presented in our data sources. First we converted the various measurement into tons (2000 pounds). Then we calculated how many tons of sugar ships could hold over the time period. Between 1550-1559, ships held approximately 256 tons; between 1600-1649, ships held approximately 426 tons; and lastly, between 1650 and 1750s, ships held approximately 511 tons.

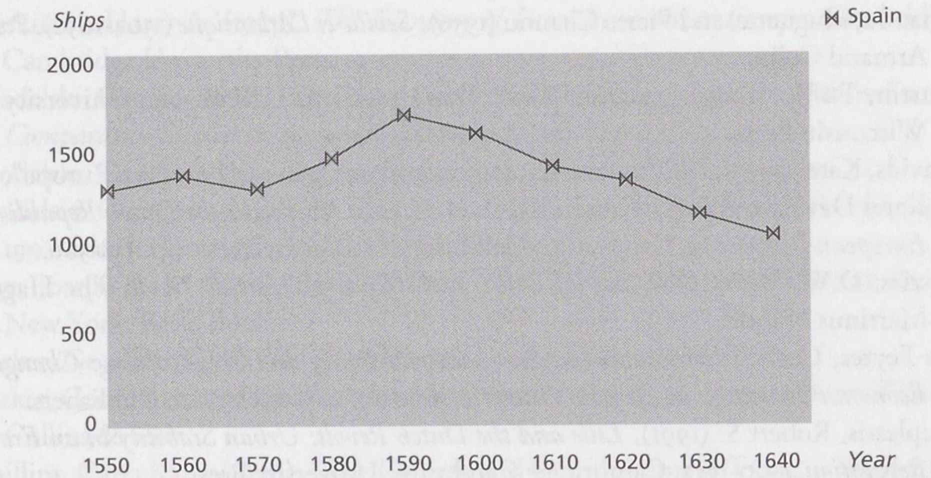
Tobacco Trade

Sources: Philips (1990) for Spain and Portugal and Price (1973) for England

The data for Spain and Portugal are provided by Phillips (1990), while the data for England comes from Price's (1973) excellent work on the Chesapeake colonies. Again, we converted measurements into tons and then calculated the number of tons of tobacco a ship could hold. In Price (1971, p. 901-902), a calculation of this amount is provided. Therefore, we found that before 1689 ships could hold about 60 tons of tobacco, and after 1690 they held about 67 tons. From this number, we were able to calculate ships passages.

Appendix B: Seville atlantic trade

Table 1 Chronology of selected important events surrounding Dutch world leadership and hegemony



* data from Chaunu and Chaunu (1956)

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