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ABSTRACT

The Commodity Export, Growth, and Distribution Connection in Southeast Asia 1500-1940*

This paper explores Southeast Asia's trade performance over the four and a half centuries from 1500 to 1940. It identifies the determinants of the commodity export performance – falling trade costs, income growth of its trading partners, and improved supply conditions at home. It also explores its impact on Southeast Asia's growth performance: trade specialization generated more macro volatility, de-industrialization, rising colonial power, and greater inequality up to World War 1, but these forces turned around in the region thereafter, including some modest industrial Catch-up. Finally, the paper elaborates on the distributional impact and colonial profitability of commodity export booms and busts throughout the last century.

JEL Classification: F14, N15 and O53
Keywords: commodities, development, distribution, southeast Asia and trade

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Why has world trade grown? This fundamental question has been posed by notable international economists like Paul Krugman, who said "Most journalistic discussion of the growth of world trade seems to view growing integration as driven by a technological imperative – to believe that improvements in transportation and communication technology constitute an irresistible force dissolving national boundaries (1995: p. 328)." An alternative explanation might stress instead declining political barriers to trade, which (like transport improvements) help link distant markets and erase commodity price gaps between them. A third potential explanation seems to have been even more powerful in practice -- unusually fast world income growth during those epochs of trade booms.

This historical debate should have a powerful resonance for modern Southeast Asia. This paper will explore the sources of the region's trade growth and its impact in three quite distinct periods: the anti-global mercantilist epoch 1500-1800, the pro-global liberal epoch 1800-1913 (sometimes called the *first global century*), and the anti-global collapse 1914-1940. In the conclusion, it asks how history speaks to the modern pro-global era since World War 2.

Southeast Asia's First Trade Boom 1500-1800

For some time, scholars have written of a secular Euro-Asian and Euro-American trade boom following the Voyages of Discovery led by Christopher Columbus heading west and Vasco da Gama heading east. What follows reports the size and timing of that secular trade boom stressing that which followed Euro-Asian routes. With the early importance of the spice trade and later the galleon trade, Southeast Asia was very much part of this world trade boom.

The most obvious explanation for the post-1500 trade boom would seem to be declining trade costs between Europe and the overseas continents with whom it traded. However, the evidence is inconsistent with this view. This section offers the economics and the evidence which allows us to decompose the sources of the inter-continental trade boom into the demand and supply fundamentals that seem to have mattered most.

The European Inter-Continental Trade Boom after 1500

Table 1 documents the Euro-Asian and Euro-American trade boom between 1500 and 1800, as well as the world trade boom which occurred thereafter.[1] The growth rates summarized there are based on data that are never quite what we'd like: sometimes trade in value, sometimes in volume; sometimes for one product, sometimes for another; sometimes carried by one country, sometimes another; and never, at least until 1820 and Angus Maddison (1995), a constant price world trade index. Still, the regional, product, and country coverage is enormous, and it's all that the archives have yielded anyway.

[Table 1 about here]

Table 1 reports two notable facts. First, the growth of world trade was pretty much the same in the 19th and 20th centuries, roughly 3.7 or 3.8 percent per annum. This is a surprising fact, given that world GDP growth doubled from 1.5 to 3 percent per annum between 1820-1913 and 1913-1992 (Maddison 1995: p. 227). Since the growth of world trade was almost identical in

[1] The focus here is on commodities other than silver and gold, since these precious metals played a monetary role as well as a more standard commodity role, and different factors thus explain their large and growing importance in international trade during the period. This paper is solely interested in the growth of non-monetary commodity trade, and as such the large literature on the impact of intercontinental silver flows on aggregate price levels, while important, is not relevant here.

the two centuries, it follows that trade shares rose much faster in the 19th than in the 20th century. So far, it looks as though the 19th century is the canonical globalization epoch, not the 20th century. Second, European inter-continental trade growth prior to 1800 was much slower, about 1.1 percent per annum. Of course, everything grew much slower in this pre-industrial period too, so a 1.1 percent per annum growth rate was plenty fast enough to ensure that European trade shares increased in the wake of da Gama and Columbus. Can this 1.1 percent per annum growth rate in European inter-continental trade be explained by declining trade costs?

The Trade Boom Was Not Driven by Declining Trade Barriers and Market Integration!

The most obvious explanation for the inter-continental trade boom is that it was caused by discovery, declining transport costs, and/or some fall in man-made barriers to trade. Call this the *market integration hypothesis*, and it implies that discovery and declining transport costs converted potential trading partners into actual trading partners by lowering the cost of doing business between them. If this market integration hypothesis is correct, then we should be able to document commodity price convergence between Europe and Asia (and the Americas) over the three centuries. After all, a decline in the costs of doing business between two markets has got to be reflected by a decline in price gaps between them. If we cannot document commodity price convergence, then the market integration hypothesis must be rejected and we will have to search for other explanations of the trade boom.

Where, then, should we look for evidence of inter-continental market integration? Initially, only goods with very high value to bulk ratios were shipped, like silk, ceramics, exotic spices and precious metals. Indeed, European long distance trade in the pre-18th century period

was strictly limited to what international economists call non-competing goods: Europe imported spices, silk, sugar and gold, items which were not produced there at all, or at least were in very scarce supply; Asia imported silver, linens and woolens, which were not found there at all (with the important exception of Japanese silver before 1668). The imports of the Dutch East India Company (hereafter, VOC: Vereenigde Oostindische Compagnie, established in 1602) were dominated by spices, tea, coffee, drugs, perfumes, dye-stuffs, sugar and saltpeter. Indeed these were 84 percent of the VOC import total in 1619/1621, 73 percent in 1698/1700, and still a hefty 64 percent as late as 1778/1780. Portuguese imports from Asia were almost all spices in 1518. Textiles came to take a larger share of that total, but spices were still 88 percent of Asian imports into Lisbon by 1610. Even the English East India Company, famous for their gamble to focus on the Indian textile trade, had imports heavily weighted by spices and other luxuries: the figure is 43.4 percent in 1668/1670 and 46.5 percent in 1758/1760. These non-competing Asian commodities were very expensive luxuries in European markets, and thus could bear the very high cost of transportation from their (cheap) sources.[2]

So what is the evidence of price convergence for those commodities which were traded during the Age of Commerce between Europe and Asia? We have the price data for spices and coffee, items which combined were 68 percent of Dutch homeward cargoes in the mid-17th century (Reid 1993: pp. 288-9). Figure 1 plots markups for cloves, pepper and coffee, where markups are defined as the ratio of European to Southeast Asian price (Bulbeck *et al.* 1998). There is plenty of evidence of price convergence for cloves from the 1590s to the 1640s, but it

[2] The Dutch, Portuguese, and English import mix data all come from Prakesh (1998: Tables 2.2, 2.3, 4.1, and 4.2, pp. 35, 36, 115, 120).

was short-lived, since the spread soared to a 350-year high in the 1660s, maintaining that high level during the VOC monopoly and up to the 1770s. The clove price spread did not fall until the end of the French Wars, and by the 1820s was one-fourteenth of the 1730s level. Between the 1620s and the 1730s, the pepper price spread showed no trend, after which it soared to a 250-year high in the 1790s. After that peak, a new era of price convergence continued up to the 1880s, when the series ends. While there is some modest evidence of price convergence for coffee during the half century between the 1730s and the 1780s, everything gained was lost and more so during the French Wars. At the war's end, price convergence took place, so that the coffee price spread in the 1850s was one-sixth of what it had been in the 1750s. Thus, there is absolutely no evidence of secular commodity price convergence for these Southeast Asian commodities so central to Dutch trade. Was English trade with South Asia any different than Dutch trade with Southeast Asia? Apparently not, at least based on the Anglo-Indian trade in pepper, tea, silk, coffee and indigo (O'Rourke and Williamson 2002).

[Figure 1 about here]

Of course, the price spread on pepper, cloves, coffee, tea and other non-competing goods was not driven by the costs of shipping, but rather by monopoly,[3] international conflict, predatory pirates, and mercantilist restrictions. Any one of these forces could raise or lower the barriers to trade, but this paper is indifferent about the sources of net changes in trade barriers

[3] Douglas Irwin (1991: especially p. 1297) suggests that pretty much *all* of the inter-continental trade at this time was by state-chartered monopolies. Like most monopolies, they raised prices paid by consumers (in Europe), lowered prices paid by suppliers (in Asia), restricted output and limited trade. This is hardly the stuff that globalization is made of! However, the investments in exploration and discovery probably would never have been made without the ability of Columbus, de Gama and their followers to internalize the returns to investments made in the Voyages of Discovery. Economists have been debating the net balance between certain short term losses from monopoly and their uncertain long term gains ever since Adam Smith. The issue is noted here but not resolved.

and of net changes in price gaps between markets. *Ceteris paribus*, anything that lowers price gaps between markets encourages trade, but there is no evidence of a secular erosion in Euro-Asian (or, as it turns out, Euro-American) commodity price gaps before the 1810s. The *ceteris paribus* qualification is, of course, important since something else must have accounted for the inter-continental trade boom if it wasn't declining trade barriers.

Is there any reason to expect the price spread on *competing* goods between Europe and Asia to have behaved differently, as opposed to the *non-competing* "exotics" we have just examined? It seems very unlikely, especially if we cannot find it for the important East Indian cloth trade. Figure 2 plots the average prices received by the East India Company on its Asian textile sales in Europe, divided by the average prices it paid for those textiles in Asia. Again, there is no sign of a secular decline in mark-ups (where mark-ups include all trade costs, as well as any East India Company monopoly profits) over the century between 1664 and 1759.[4] This textile trade was extremely large and it was on the rise. Yet, the evidence on freight rates and mark-ups suggests that growing trade volumes in the late 17th century were almost certainly driven by the outward expansion of European import demand or Asian export supply rather than by declining inter-continental trade barriers and market integration *per se*. If it was market integration at work, we should see evidence of commodity price convergence and erosion in inter-continental price gaps. Yet, we do not.

[Figure 2 about here]

So, What Did Drive the Trade Boom? Theory

[4] All these import price data come from Chaudhuri (1978: Tables A.13 and C.24), which also provides data on sales prices and mark-ups.

The question is whether this trade boom was due to greater market integration or to demand and supply shifts in the various regions. The boom in European imports from Asia must have had its source in some combination of three factors: a boom in European demand for tradables, a boom in tradable supply from Asia, and/or a decline in the barriers to trade between them. If a decline in trade barriers had accounted for the European overseas trade boom over the three centuries, then market integration would have been the driving force. We are not searching for perfect market integration and price equalization, but we are searching for evidence of *greater* market integration and *smaller* price gaps through time. Since there is little evidence of any significant decline in trade barriers, Euro-Asian trade must have boomed *in spite of* barriers to trade and anti-global mercantilist sentiment. There would have been a bigger boom without these anti-global forces.

Figure 3 presents a stylized view of trade between Europe and the rest of the world (the latter denoted by an asterisk). MM is the European import demand function (that is, domestic demand minus domestic supply), with import demand declining as the home market price (p) increases. SS is the foreign export supply function (foreign supply minus domestic demand), with export supply rising as the price abroad (p^*) increases. It is worth emphasizing that SS is foreign supply less domestic demand; thus calling SS a 'foreign export supply function' does *not* exclude the possibility that demand conditions in Asia could help account for the inter-continental trade boom.

In the absence of transport costs, monopolies, wars, pirates, and other trade barriers, international commodity markets would be perfectly integrated: prices would be the same at home and abroad, determined by the intersection of the two schedules. Transport costs,

protection, war, pirates, and monopoly drive a wedge (t) between export and import prices: higher tariffs, transport costs, war embargoes and monopoly rents increase the wedge while lower barriers reduce it. Global commodity market integration is represented in Figure 3 by a decline in the wedge: falling transport costs, falling trading monopoly rents, falling tariffs, the suppression of pirates, or a return to peace all lead to falling import prices in both places, rising export prices in both places, an erosion of price gaps between them, and an increase in trade volumes connecting them.

[Figure 3 about here]

The fact that trade should rise as trade barriers fall is, of course, the rationale behind using trade volumes or the share of trade (exports, or exports plus imports) in GDP as a proxy for international commodity market integration. However, Figure 3 makes it clear that global commodity market integration is not the only reason why trade volumes, or trade's share in GDP, might increase over time. Just because we see a trade boom doesn't necessarily mean that more liberal trade policies or transport revolutions are at work. After all, outward shifts in either import demand (to MM') or export supply (to SS') could also lead to trade expansion, and such shifts could occur as a result of population growth, the settlement of frontiers, capital accumulation, technological change, a shift in income distribution favoring those who import "exotic" luxuries, and a variety of other factors. Thus, Figure 3 argues that the *only* irrefutable evidence that global commodity market integration is taking place is a decline in the international commodity price gaps, or what we call commodity price convergence. However, we cannot find it.

The post-1500 trade boom is represented as a rise from T_0 to T_1, T_2 or T_3. If $\underline{t}$ remained

constant (no net decline in trade barriers and no move toward more global commodity market integration), then outward shifts in either MM or SS, but not both, would generate a trade boom to T_1 (where the price gap, $\underline{t}$, remains the same, although prices change in both markets). An outward shift in *both* MM and SS would generate a bigger trade boom to T_2 (still holding $\underline{t}$ constant). If at the same time $\underline{t}$ evaporated (complete global commodity market integration), we would observe an even bigger trade boom to T_3. Figure 3 has been translated into an explicit "sources-of-trade" equation, estimated, and then, given commodity prices in European markets, used to decompose the secular trade boom in European import demand and Asian export supply (O'Rourke and Williamson 2002). But first, a word about income growth, and thus import demand, in Europe.

Let's begin with the premise that the vast majority of the "exotic" imports from Asia were out of reach of all but the rich:[5] changing living standards of the workers in cities and villages would have had only a trivial impact on European import demand; changing incomes of those at or near the top of the income pyramid would have had a big impact. The rich consisted mainly of landowning elite, urban merchants, and those serving the rich and controlling the poor. Given this premise, the growth of the European "surplus" between 1500 and 1800 can be estimated by the behavior of English land rents, although French, Dutch and Flemish land rents appear to have behaved pretty much the same way over the three centuries. The results are these. European surplus income fell in the 16th century, so it could not have contributed anything to the

[5] Some readers might challenge this premise, even though spices, coffee, silk and ceramics are never found in English working class budgets even as late as the 1810s. Furthermore, while Debin Ma argues that the "democratization" of silk accelerated over time, "it was the twentieth-century U.S. silk-manufacturing industry that [exhibited its] most radical expression" (Ma 1999: pp. 62-3). It is true, however, that by the very end of our period tea and sugar were being increasingly consumed by the working classes in the richest European countries.

trade boom; surplus income grew vigorously in the 17th and 18th centuries, when its contribution to the trade boom must have been much more important; and surplus income boomed in the 19th century, when it must have contributed very importantly to the trade boom.

What Drove the Trade Boom? Fact

As we just saw, European income growth explained none of the 16th century trade boom and the domestic relative price of these imported goods fell. The 16th century trade boom must therefore be explained either by rising overseas supply, falling overseas demand, or by some combination of the two. In contrast, the more modest 17th century trade boom can be explained entirely by European income growth, as evidenced by the rising relative prices of non-competing imports during the period. The 18th century trade boom is explained by a mix of demand and supply: between 59 and 75 percent of the trade boom can be explained by European income growth. Over the three centuries as a whole, European income growth explained between 50 and 65 percent of the inter-continental trade boom. The average of these two figures is 67 percent, exactly the same as that calculated for the OECD trade boom from the late 1950s to the late 1980s (Baier and Bergstrand 2001), while the figure is 57 percent of the world trade boom between 1870 and 1913 (Estevadeordal *et al.* 2003: Table III).

A European Population and Trade Boom Connection?

European constant-price surplus income growth accounted for none of the inter-continental trade boom in the 16th century, all of it in 17th century, and about two-thirds of it in the 18th century. What determined growth of this economic surplus, a surplus which in pre-

industrial times consisted mostly of land rents? Since land acreage changed only very slowly, or not at all, in England, France, the Lowlands and the rest of western Europe, the surplus must have grown at about the same rate as did rents per acre. In the 16th and 17th centuries, total factor productivity growth was very slow in European agriculture, so land rents must have been driven primarily by land/labor ratios – periods of rising population pressure on the land being periods of rapid increase in the ratio of land rents to the wages of landless laborers, as well as rising land rents themselves. Thus, European population pressure on the land must have contributed mightily to the trade boom after 1600, and the mechanism was from decreasing land-labor ratios, to increasing land rents, to increasing economic surplus, to soaring inequality, and to booming demands for "exotic" imports from Asia.

Did Chinese Autarkic Policy Crowd in Europe?

It appears that overseas export supply explained the 16th century trade boom while European import demand explained most of the 17th and 18th century booms. Could China explain those special 16th century export supply conditions? South and Southeast Asian export supply to Europe of spices and such equaled total South and Southeast Asian supply minus East Asian demand. There is a traditional view which suggests that East Asian demand declined from the 15th century onward, as China went increasingly autarkic. This would have had a major impact on the demand for internationally traded commodities, since China represented as much as a quarter of global GDP at that time.[6] If true, this move would have represented a profound

[6] Maddison (2001: p. 263). See also Maddison (1998: pp. 19-38).

switch from what appears to have been a fairly open trade policy. Between 1405 and 1430, seven great junk armadas sailed as far as Zanzibar, and Chinese trade with East Africa was sizeable. Chinese envoys went to Mecca, and kings from Ceylon and Sumatra were brought back to China. Trade followed in their wake: "The emperor Yung-lo ... had found the imported goods [of] horses, copper, timber, hides, drugs, spices, gold, silver, even rice ... to be well worth acquiring. He had sent in return … silk, ceramics and tea. ... In addition, private trade was growing (Jones 1981: p. 204)." But the last great Chinese fleet was sent abroad in 1433, and soon afterwards private maritime trade was declared illegal. While the resumption of the imperial voyages was proposed in 1480, the idea was crushed and by 1553 the art of building large ships had, according to the traditional view, been forgotten (Jones 1981: pp. 203-5). While smuggling and piracy filled a bit of the vacuum, the traditional view holds that the withdrawal continued and intensified: the Ming authorities (1368-1644) eventually banned all trade and the Manchu authorities (1644-1911) pushed the autarkic policy still further. Thus, the official imperial policy of shutting China's doors to external trade was already in place by the time of the European Voyages of Discovery. And, so the argument goes, China kept its doors tightly closed until it lost the Opium Wars to British gunboats, and the Treaty of Nanking (1842) opened China up again.

More modern scholarship challenges the traditional view and suggests that imperial trade policy varied considerably between 1433 and 1842, that private interests found ways to overcome imperial anti-trade decrees, and that China's trade with the rest of the world flourished (Marks 1997; Pomeranz 2000: pp. 114-65, 189-94). After all, what else can explain the growth

of China's exports of porcelain, tea and silk to foreign markets (including Europe)?[7] Furthermore, didn't those exports make it possible for China to import all that silver which was being mined in the Americas?[8] Still, the new "partially-open" view of China does not necessarily exclude the possibility that official policy had *some* effect. For example, Robert Marks wrote recently that "the explosive growth of Chinese coastal and foreign trade immediately follow[ed] the lifting in 1684 of the ban on coastal shipping" (Marks 1999: p. 104). If explosive growth followed in the wake of going open in 1684, policy must have had a powerful closing effect before. How much before? How closed? And if the Nanking Treaty of 1842 marked a "breakthrough for the history of the silk trade," after which there was "the evolution of a single global market" for silk, restrictive trade policy must again have had some trade-suppressing effect prior to 1842 (Ma 1999: p. 52). There is an abundant literature that deals with this issue, but nowhere is there any really satisfactory evidence offered to tell us how open or closed China was to foreign trade at various points in time. Such evidence should be price-based rather than quantity-based: while goods may have continually flowed across Chinese borders, despite official restrictions, the real test of policy effectiveness is whether the relative price of imports rose as a result of government policy, and whether the relative price of exportables fell.

We do not have the price evidence which could discriminate between the hypotheses that China was relatively closed or open between 1500 and 1800. But suppose it *was* closed: China's

[7] We would get some insight into this question if we had European relative price series for porcelain, tea and silk. However, we do not. Tea prices are only available starting in 1750, and prices of silk and porcelain in European markets cannot be found in the standard price histories.
[8] See von Glahn (1996), Flynn (1995), and Flynn and Giraldez (1997).

anti-trade policy move in the 15th century would have crowded in European trade with the rest of Asia. The phrase "rest of Asia" means South and Southeast Asia since Korea and Japan joined China's move towards greater autarky until American gunboats opened up Japan to trade in 1858 after more than two centuries of relative economic isolation under Tokugawa rule. We stress *relative* in all three East Asian cases since the issue is only whether restrictions on the external trade of China, Korea and Japan *rose* between 1450 and 1800. The issue is not whether policy *eliminated* inter-continental or intra-continental trade involving East Asia. Rather, it is whether policy significantly *reduced* it.

Might the European inter-continental trade boom documented in Table 1 be a figment of Euro-centric trade histories, and might it actually reflect international economic *disintegration*, rather than integration? While this is posed only as a proposition worth exploring, a withdrawal of China from Asian markets would only have had its impact during that period of *transition* from an open to a closed trade policy which we take to be during the late 15th and 16th centuries onward. Once China had completely withdrawn, it would, of course, have had no further impact on world markets. But *while* it withdrew, the prices of exportables in South and Southeast Asia would have fallen as demand in a previously major market dried up. At the same time, the price of importables in South and Southeast Asia would have risen as supply from a previously major producer dried up. Did relative prices in South and Southeast Asia exhibit these trends from the late 15th century onwards? Better yet, did the price of exportables in *China* fall relative to the price of its importables? We do not yet know.

Southeast Asia's Second Trade Boom 1800-1913

Four things happened to the world economy from the early 19th century to World War 1 which had never happened before and which would not happen again until after World War 2. First, the richest and fastest growing European economies went open, removing long-standing mercantilist policies, lowering tariffs, and removing non-tariff barriers. Their colonies in Africa and Asia did the same, and many of the others were forced to follow suit with gunboat diplomacy. In addition, much of the world integrated their currencies by going on the gold standard and other currency unions, lowering exchange risk. Thus, liberal commercial and exchange rate policy gave trade one good reason to boom. Second, led by new steam engine technologies, the world underwent a pro-trade transport revolution. As transportation costs fell dramatically, the ancient barrier of distance was broken, and all forms of global communication boomed, especially trade and migration. The revolution was given added impetus by the appearance of the telegraph, another pro-trade technology that lowered uncertainty about prices in distant markets. Third, and carried by an industrial revolution in Europe and its offshoots, economic growth rose steeply to rates many times faster than what had been common over the previous two millennia. As a consequence, the demand for everything soared, especially imports of manufacturing intermediate inputs (cotton, wool, tin, rubber), fuel (coal, petroleum), and luxury foodstuffs (sugar, tea, coffee, meat). Fourth, the world was at peace. Frequent wars between the European economic leaders and between their trading partners in the periphery (and civil unrest within them) had shut down trade much of the time over the three centuries after Columbus discovered the Americas and de Gama emerged on the Indian Ocean. Wars shut down trade by embargo, privateering, the draft of merchant marine bottoms for naval use, and market

uncertainty (O'Rourke and Findlay 2007). By the early 19th century, *pax Britannica* reigned, and a trade-stimulating peace prevailed for a century.

Thus, trade had four reasons to boom during this first global century and Southeast Asia was one commodity exporter which took best advantage of it.

The Great Commodity Exporters' Terms of Trade Boom

Since falling trade costs from all sources accounted for more than half of the trade boom between 1870 and 1914 (Jacks *et al.* 2008: p. 529), it must have accounted for even more than that before 1870 when the fall in transport costs was more rapid and the move to free trade was in full swing. In any case, it is clear that falling trade costs played a major role in fueling the trade boom between core and periphery. By raising every country's export prices and lowering every country's import prices, it also contributed to a rise in every country's external terms of trade, especially, as it turned out, in Southeast Asia and the rest of the commodity exporting poor periphery. The move by the European industrial core toward more liberal commercial policy (Estevadeordal *et al.* 2003), a commitment to the gold standard (Meissner 2005) and perhaps even imperialism itself (Ferguson 2004; Mitchener and Weidenmier 2008) all made additional contributions to the world trade boom.

The accelerating growth in world GDP, led by industrializing Europe and its offshoots, was the second force driving the trade boom. The derived demand for industrial intermediates -- like fuels, fibers, and metals -- soared as manufacturing production led the way. Thus, as the European core and its offshoots raised their industrial output shares, manufacturing output growth raced ahead of GDP growth. Rapid manufacturing productivity growth in the core

lowered supply costs and output prices, demand for inexpensive factory-made manufactures expanded, and by so doing generated a soaring derived demand for raw material inputs. This event was reinforced in the core by accelerating GDP per capita growth and a high income elasticity of demand for luxury consumption goods like meat, dairy products, fruit, sugar, tea, tobacco, and coffee. Since industrialization was driven by productivity advance favoring manufacturing, the relative price of manufactures fell everywhere, including the poor periphery where they were imported.

All of these forces produced a powerful and sustained terms of trade[9] boom in the commodity exporting periphery, an event that stretched over almost a century. Some parts of the periphery had much greater terms of trade booms than others, and some reached a secular peak later than others, but all (except China and Cuba) underwent a secular terms of trade boom. Factor supply conditions facilitated the periphery's response to these external demand shocks, carried by South-South migrations from labor abundant to labor scarce regions within the periphery -- Chinese migrating to Luzon, Indochina, Siam, the Dutch East Indies, and the rest of Southeast Asia, and by financial capital flows from the industrial core – the French, Dutch and British colonists in the case of Southeast Asia. Like the others in the periphery, the Dutch East Indies, the Philippines, Indochina and the rest of Southeast Asia increasingly specialized in a few primary products, reduced their production of manufactures and imported them in exchange. Most also reduced foodstuff production. While Siam and Burma were obvious exceptions, the Dutch East Indies, Malaya, and the Philippines were often net importers of rice during these

[9] The terms of trade phrase used here always refers to the *net barter* terms of trade, the ratio of the average price of

years. In any case, all of Southeast Asia fell further behind the per capita incomes of the industrial core.

Thus, the periphery shared some of the fruits of the industrial revolution taking place in the core by the gift of the terms of trade boom, although a big industrialization-driven Great Divergence still emerged. That is, the income per capita gap between core and periphery widen sharply. On average, Southeast Asian GDP per capita was 47 percent of western Europe in 1820 (Maddison 2008). In 1870, the figure had fallen to 29 percent, and to 22 percent in 1913.

All of these pro-global forces eventually abated. A protectionist backlash swept over continental Europe and Latin America (Williamson 2006). The rate of decline in real transport costs along sea lanes slowed down before World War 1, and then stabilized for the rest of the 20th century (Wiliamson 2011: Chapter 2). Most of the railroad networks were completed before 1913, even those connecting interior to port in Southeast Asia (van Zanden and Marks 2012: pp. 90-1). The rate of growth of manufacturing slowed down in the core as the transition to industrial maturity was completed and manufacturing began to grow at rates closer to those of GDP. As these forces abated, the resulting slowdown in commodity demand growth was reinforced by resource-saving innovations in the industrial core, induced, in large part, by those high and rising commodity prices during the century-long terms of trade boom. Thus, the secular boom faded. Exactly when and where the boom faded depended on the export commodity, but throughout the poor periphery each region's terms of trade peaked somewhere between the 1860s and World War 1.

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imports to that of exports.

This terms of trade experience can be documented for the 1780s onwards for the European periphery, Latin America, the Middle East, South Asia (Ceylon and India), Southeast Asia (Indonesia, Malaya, the Philippines, and Siam), and East Asia (China and Japan). Figure 4 and Table 2 document the terms of trade boom. Excluding China and the rest of East Asia (more on that below), the terms of trade in the poor periphery soared from the late 18th century to the late 1880s and early 1890s, after which it underwent a modest decline up to 1913, before starting the interwar collapse. The secular price boom was huge: between the half-decades 1796-1800 and 1856-1860, the terms of trade increased by almost two and a half times, or at an annual rate of 1.5 percent, a rate which was vastly greater than per capita income growth in Asia (0.1 percent per annum 1820-1870; Maddison 1995: p. 24), and even greater than per capita income growth in the United Kingdom 1820-1870 (1.2 percent per annum: Maddison 1995: p. 23).

[Table 2 and Figure 4 about here]

Not every part of the poor periphery underwent a big terms of trade boom since what a region traded mattered. The best counter-example is China, which did not undergo a terms of trade boom over the century before 1913, but rather underwent a secular slump! As the rest of the periphery began the boom between 1796 and 1821, China underwent its first big *collapse*, with its terms of trade falling to one-fifth (sic!) of the 1796 level. When China finally joined the boom taking place in the rest of the periphery, it was very brief since its terms of trade peaked out much earlier than the rest, in 1840 after only a two decade boom. Following the early 1860s, China underwent the same slow secular decline in its terms of trade that was common across much of the late 19th century poor periphery. China's terms of trade *exceptionalism* was driven by its unusual country-specific mix of imports and exports. On the import side, what

distinguished China from the rest was opium. The price of imported opium rose sharply from the 1780s to the 1820s, partly because of a successful monopoly by the East India Company (Chaudhuri 1978; Farrington 2002; Bowen *et al.* 2003), and it maintained those high (but volatile) levels until the 1880s (Clingingsmith and Williamson 2008).[10] Since opium imports rose from about 30 to 50 percent of total Chinese imports over the period, the rise in the opium price played a key role in pushing China's terms of trade downwards. Reinforcing that secular fall was the fact that it also exported the 'wrong' products since the price of silk and cotton fell dramatically over the century between the 1780s and 1880s, by 60 and 71 percent, respectively (Mulhall 1892: pp. 471-8).

While China was certainly big enough to dominate East Asian trends, Japan was exceptional as well. First, it remained closed to world trade until the mid-1850s, so that there is no terms of trade trend worth reporting up to that point since its trade sector was so tiny. Second, when Japan was forced to go open in 1854 by the threat of American gunships commanded by Matthew Perry, it underwent the biggest 19th century terms of trade boom by far: the price of its exportables boomed and the price if its importables slumped, just when the rest of the poor periphery had completed much of its secular boom.

East Asian *exceptionalism* indeed!

While each region in the poor periphery had much the same import mix (except for China and its opium), each specialized in quite different commodities on the export side. Endowments and comparative advantage dictated the export mix, and different commodity price behavior

[10] I am not suggesting here that the price of opium was exogenous to the Chinese market. Indeed, rising Chinese demand helped account for part of the price boom, and monopoly behavior by the East India Company probably

implied different terms of trade magnitudes during the secular boom, as well as different terms of trade peak years. Figure 4 documents terms of trade performance in each of the six poor periphery regions, some series starting as early as 1782. The regional time series are constructed as a fixed 1870 population weighted average of the region's countries. Table 2 and Figure 4 summarize the magnitude of the boom and its length by region and by major country members, making a comparative assessment possible. Table 2 reports the starting year in each region's terms of trade time series, the peak year of the secular boom in the series, the annual growth rate between half-decade averages from start to peak, and the annual growth rate from start to the half-decade 1886-1890. While there was a terms of trade boom everywhere (except for China and Cuba), Southeast Asia had a bigger and longer boom than most. The terms of trade boom in Southeast Asia persisted much longer than the periphery average – up to 1896, and the size of the century-long boom was double the periphery average. Still, there was immense variance within Southeast Asia: terms of trade for Siam (a rice exporter) grew at 'only' 0.4 percent per annum over the century up to 1885-90, but it grew almost twice as fast in the Philippines (an exporter of copra, hemp, sugar, and tobacco) at 0.7 percent per annum, and more than *eight* times as fast in the Dutch East Indies at 3.3 percent per annum (an exporter of coffee, copra, sugar, tea, tin, tobacco, and, towards the end of the period, rubber and petroleum), the highest in the periphery. Due to its size, Indonesia dominates the Southeast Asian weighted average, and the terms of trade experience suggests that globalization must have had a bigger impact on the region than anywhere else in the non-European periphery.

Southeast Asia in the 19th century illustrates export-led growth *par excellence.*

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accounted for the rest.

De-Industrialization

The terms of trade boom encouraged the periphery to increase its specialization in commodity exports. The production of manufactures and even food crops was reduced to release labor, land and other resources for use in the booming commodity producing sectors. De-industrialization was one manifestation of this process, and it happened everywhere in the periphery. Productivity gains in west European manufacturing, first in cottage industry and then in factory goods, led to declining world prices of manufactures, making production in Mexico, São Paolo, Catalonia, Russia, Anatolia, Bengal, Madras, Java, Luzon and elsewhere increasingly unprofitable. These forces were reinforced by declining sea freight rates, which served to foster trade and specialization for both Europe and its trading partners. As a result, Europe first won over world export markets in manufactures and eventually took over much of the periphery's domestic markets as well. This is simply the other side of the terms-of-trade-boom coin: relative to textiles, metals and other manufactures, the periphery's commodity export sector saw its terms of trade improve and thus drew workers away from manufacturing and often away from food grain production. We call it the *Dutch disease,* and it was powerful.

Was there really any manufacturing there to de-industrialize? Of course, everywhere, including Europe, the technology was labor intensive and animal or hand-powered, and the pre-factory organization was the putting-out cottage industry system. But still, the business of making textiles, ceramics, furniture, building materials, metal products and primitive machines employed large numbers and had high value added. And in 1750, India (plus modern Pakistan, Bangladesh and Ceylon) and China together produced 57.3 percent of world manufacturing (Bairoch 1982). In addition, while China and the Indian sub-continent produced 57.3 percent of

world manufacturing output during the mid 18th century, these two regions claimed 'only' 46.7 percent of world GDP (Maddison 2007). These two figures imply that most of Asia had higher manufacturing output shares in domestic GDP than did the rest of the world. The developed core produced 27 percent of world manufacturing output, more than its 21.9 percent share of world GDP, also implying a higher manufacturing output share than the global average. The amazing implication of these numbers is that China and India were just as 'industrialized' as was the European core in 1750.

And then came the (industrial) revolution! By 1830, the regional shares in world manufacturing output were moving everywhere towards what W. Arthur Lewis (1978) called the *new economic order*: the developed core manufacturing share rose to 39.5 percent, and it fell everywhere else. Indeed, evidence offered by Patrick O'Brien (2004: Table 3) suggests that the evolution towards world manufacturing dominance was well on its way by the 1830s, when the share of United Kingdom exports in world manufactures exports was 91 percent, and the share of poor periphery commodity exports was 92 percent of world commodity exports. All that was left to dominate were domestic markets in the periphery. By the 1880s, de-industrialization in the poor periphery was about complete.

Table 3 offers another index of 19th century de-industrialization in the poor periphery. For Mexico, Ottoman Turkey, India and Indonesia, the table measures the loss of domestic textile manufactures markets to foreign imports. That is, the figures report the share of domestic consumption supplied by local and foreign sources. Take India first. Bengal exported about 27 percent of domestic consumption (21 percent of domestic production) in 1750. That figure had fallen to 6 or 7 percent by 1800. Thus, even before the onset of the factory-led industrial

revolution in Britain, India had lost a big chunk of its export market. By 1833, India had lost *all* of its (net) export market *and* 5 percent of its domestic market. By 1877, the de-industrial damage was done, with domestic producers claiming only 35-42 percent of their own home market. Although the Ottoman Empire did not have a large foreign market to lose, it underwent a similar dramatic collapse in its home market, domestic producers undergoing a huge fall in their home market share from 97 to 11-38 percent over the half century between the 1820s and the 1870s. In the Dutch East Indies local production fell from 82 to 38 percent of the home market between 1822 and 1870. But de-industrialization persisted much longer there, with the local producer share falling still further to 11 percent in 1913.

[Table 3 about here]

Indonesian textile manufacturing was an important economic activity in the early 1800s. Indeed, Jan Luiten van Zanden estimates that textiles were about 15 percent of GDP in the 1820s (van Zanden 2002), a figure suggesting that manufacturing may have been as much as a fifth or even a quarter of total Indonesian GDP at that time. By the early 1850s, textiles had fallen by more than half, to 6-7 percent of GDP. And, as we have seen in Table 3, the share of the home textile market supplied by Indonesian producers dropped from almost 82 to 38 percent from 1822 to 1870, before falling still further to about 11 percent in 1913. Dramatic de-industrialization indeed! Pierre van der Eng, who derived these estimates, points out that value added in textile manufacturing increased between 1820 and 1871 (van der Eng 2007: p. 1). But in a growing economy, it is the sector's performance *relative* to the overall economy that matters (Booth 1998: pp. 96-7). Although per capita income hardly grew at all over the half century following 1820 (only 0.1 percent per annum according to Maddison 2007), population grew at

1.2 percent and GDP at 1.3 percent per annum. Thus, it's the relative de-industrialization measure that matters in judging the impact of Dutch disease effects in Indonesia, and they were enormous.

Indonesia was not alone in suffering de-industrialization, since it happened to all its Southeast Asian neighbors, including Burma, the Philippines and Siam. By the late 1890s, Burma's "textile industry had suffered a serious decline and it was finally … destroyed by the 1920s" and "weaving …, spinning, iron and metal making, pottery … and paper making" had declined in Siam (Resnick 1970: pp. 57, 60). Like Indonesia, the Philippines started the 19th century with a well-developed textile industry. Indeed, by 1818 local cloth accounted for 8 percent of Manila's exports:

> "The province of Iloilo … developed valuable *piña*, dyed in bright and varied colours. This was woven chiefly with pineapple fibre, but might also contain cotton, silk and *abacá*. The industry sucked in migrants from far and wide … selling as far afield as Europe and the Americas" (Clarence-Smith 2005: p. 8).

But the Dutch disease spelled trouble for Philippine industry too. By 1847, almost 60 percent of Philippine imports were textiles, and they increased nine-fold over the half-century that followed (Legarda 1999: pp. 149-50). By the 1880s, "native textiles were in a sad state" especially in southern Panay (around Iloilo) and Ilocos (Legarda 1999: p. 155). Spanish colonial authorities did not use tariffs to fend off the flood of European manufactures since the average tariff rate in the Philippines never rose above 7 percent between 1844 and 1874, and the tariff system was otherwise thoroughly liberalized in the late 1860s (Legarda 1999: pp. 198, 205), as it was in Indonesia by the Dutch colonists (Booth 1998: pp. 215-16).

In short, it does indeed appear that the biggest terms of trade boom 1800-1913 produced the biggest Dutch disease and thus the biggest de-industrialization in Indonesia and Southeast Asia.

Rising Inequality, Strengthening Colonial Rule

Why should we care about globalization-induced distribution effects in the poor periphery? In judging the impact of globalization on any economy, we can focus on the income gains for the average resident (the so-called gains from trade), the distributional impact of those gains (who gains and who loses), and the long run growth impact. So far, we have focused on per capita income and the average resident. Social fairness, however, argues that we should explore the extent to which these gains are shared across all income classes, social groups, and regions. In addition, if the distribution of income is thought to have an impact on long run growth performance and thus on the Great Divergence (Acemoglu *et al.* 2001, 2002; Engerman and Sokoloff 1997, 2012), we have even more reason to see who gained from globalization in the poor periphery during the first global century before 1913. Finally, rising mineral rents, land rents, and tax revenues from commodity-boom-generated incomes, all favored the colonialists, their bureaucracy, the financial condition of the colonial system, and their policies.

What happened to income distribution in the poor periphery when these pre-industrial societies were exposed to global forces across the 19th century? This question can be answered by focusing on the returns to labor relative to land and mineral resources, or the wage-rental ratio. Where agriculture and mining are 'big' in pre-industrial economies, the changing wage-rental ratio can be a very effective proxy for trends in inequality (Williamson 1997, 2002). A

'big' agriculture-cum-mining sector is one in which the share of land and mineral resources in total economy-wide tangible wealth is more than a third and/or in which the employment share is more than a half. Around the turn of the last century, the agriculture employment share (percent) in Asia was certainly 'big': India 67.3, Indonesia 73.1, Japan 70, and Taiwan 70.3 (Mitchell 1998: pp. 91-101).

The denominator "rental" in the wage-rental ratio does *not* refer to the returns to capital. Indeed, a well integrated world capital market insured that risk-adjusted financial capital costs were pretty much equated the world around by 1913 (Obstfeld and Taylor 2004). Thus, while terms of trade shocks should have influenced the returns to internationally immobile land, mineral resources, and labor, they should not have influenced returns to internationally mobile capital. Furthermore, the distribution of income in the 19th century periphery was determined just as the classical economists modeled it, namely, by the relative shares of land (including mineral) rents and wages in national income. To assess the distribution impact of world commodity markets on the periphery, we should, therefore, focus on labor and land, and thus on the wage-rental ratio.[11]

Ever since Eli Heckscher and Bertil Ohlin wrote about the problem almost a century ago (Flam and Flanders 1991), world trade booms have been associated with relative factor price changes. Consider a simple characterization of Lewis's new international economic order where the periphery exports resource-intensive commodities at price P_C in exchange for imports of

[11] In contrast, the modern distribution literature focuses on wages by skill and the earnings distribution. Skills and financial capital were not critical factors of production in the pre-modern periphery, and thus were only marginally relevant to income distributions.

manufactures from the industrial core at price P_M. If a world trade boom raises P_C/P_M, the wage-rental ratio, w/r, should fall in the poor resource-abundant commodity exporter (since the export boom raises the relative demand for land and mineral resources). Since land and other natural resources were held by the favored few, the pre-World War 1 world trade boom implied lesser inequality in resource-scarce economies like those in western Europe and East Asia, where land rents (and land values) fell, wages rose, and w/r rose even further. For the commodity exporters, the pre-World War 1 terms of trade boom induced a rise in land (and, more generally, resource) rents, and an even greater fall in w/r, implying greater inequality, especially where the ownership of land dictated the ownership of wealth. Even in poor countries of small holdings, it appears that globalization served to increase the concentration of land holdings in many regions, like Southeast Asia, thus adding even more to the inequality trends. That is, small holders moving into cash crops accumulated debt to finance the increased use of purchased inputs, more extensive irrigation systems, and better transportation, all of which was essential to supply booming world markets. It also exposed them to greater price volatility. Thus, default during slumps converted many of these small holders into tenants or wage labor on large estates. Thus, cash tenancy on rice-producing land rose in Burma from 25 to 58 percent between the 1900s and 1930s, and similar trends took place in Indochina, Assam and Tonkin (Steinberg 1987). The move to large sugar plantations in the Philippines had the same impact on land concentration there (Corpuz 1997).

So much for theory. What about the facts? Export prices boomed in the commodity-specializing countries throughout most of the 19th century, while, as we shall see in the next section, they collapsed in the interwar years. Thus, the relative rewards to land and labor – and

overall income distribution -- should have moved in very different directions on either side of World War 1. Exactly how they were affected depended, of course, on whether a country's abundant factor was land or labor.

In contrast with land scarce East Asia, the Punjab was relatively land abundant, a characterization that is confirmed by the fact that agricultural exports from the Punjab to Europe boomed after the early 1870s, while irrigation investment, immigration and new settlement made it behave like a frontier region. Globalization should have had the opposite effect on the wage-rental ratio in land abundant Punjab compared with land scarce East Asia: it should have fallen in the former, and fall it did. Between 1875/79 and 1910/14, the wage-rental ratio in the Punjab fell by 60 percent (Table 4). The Punjab wage-rental ratio experience was not so different from that of the Latin American Southern Cone and other land abundant parts of the poor periphery. Between 1880/84 and 1910/14 the wage-rent ratio fell by 85 percent in the combined pair of Argentina and Uruguay. Egypt, riding a cotton boom, conformed to these relative factor price trends: the Egyptian wage-rental ratio fell by 54 percent from the late 1870s to World War 1, and by 85 percent from the late 1880s onwards.

[Table 4 about here]

The recorded decline in wage-rental ratios in the land abundant Southern Cone, the Punjab and Egypt prior to World War 1 is simply enormous. But they were even bigger in land abundant and labor scarce Southeast Asia: the wage-rental ratio fell by 44 percent in Burma over the twenty years between 1890/94 and 1910/14; in Siam, it fell by 92 percent between 1890/94 and 1910/14, and by an even bigger 98 percent between 1870/74 and 1910/14. These trends had obvious inequality implications in resource abundant regions as the landed local and colonial

elite gained dramatically relative to labor. As noted above, globalization also served to increase the concentration of land holdings in much of Southeast Asia due to rising small holder indebtedness as they shifted in to commercial export crops and exposed themselves to greater price volatility associated with many of those crops, resulting in subsequent default for the poorly insured. Small holders evolved in to tenant or wage labor on large estates (e.g, plantations in the Dutch East Indies, van Zanden and Marks 2012: p. 74), inducing more land and wealth concentration, and even more income inequality as a consequence.

In Southeast Asia, Indonesia's inequality trends are documented best. Economy-wide labor productivity rose by 1.5 percent per annum between 1860 and 1914 in Java (van Zanden and Marks 2012: Table 2.1, p. 16), while real wages hardly changed at all (Allen *et al.* 2011: Figure 6.4). This is, of course, consistent with soaring rent/wage ratios. But Java offers even better inequality evidence: between 1880 and 1925, the Gini coefficient there rose from 0.39 to 0.48, and the ratio of average incomes (including foreign Asiatics – mainly Chinese -- and Europeans) to that of natives rose from 1.12 to 1.34 (van Zanden and Marks 2012: Table 6.3, p. 118). In short, inequality soared during the commodity price boom, and European colonists raised their share of the spoils. It seems unlikely that things were any different in Indochina, Malaya, Siam, and the Philippines.

Southeast Asia's Trade Bust 1914-1940

The Bad News: Commodity Price Volatility and Export-Led Collapse

Commodity price, export revenue, and income volatility was hardly unfamiliar to the poor periphery before the interwar decades and the Great Depression. Indeed, commodity prices have always been far more volatile than manufactures or services (Jacks *et al.* 2011) and they had a powerful negative impact on GDP and its growth in the poor periphery between 1870 and today (Blattman *et al.* 2007; Poelhekke and van der Ploeg 2009). Table 5 documents terms of trade volatility for the industrial colonizers and all regions of the poor periphery over the seven decades before World War 2. On average, the volatility index in the periphery was 78 percent higher than the industrial leaders, and it was 83 percent higher in South and Southeast Asia. Before the Great Depression, the really big commodity price busts were in the 1840s, the late 1860s, the mid 1880s, and the late 1890s (Figure 4). Thus, the experience of Southeast Asia during the 1930s should come as no surprise. Between 1929 and 1932, the terms of trade fell for these four Southeast Asia nations by: Burma 24 percent; Indonesia 20 percent; the Philippines 38 percent; and Siam 32 percent (data underlying Blattman *et al.* 2007).

[Table 5 about here]

But the long run secular decline in their terms of trade started well before the 1930s: in Southeast Asia, the secular peak was 1896 (Table 2), eventually turning into a 20th century secular bust during the interwar slowdown and the Great Depression of the 1930s. For example, between 1896 and 1932, the terms of trade for Indonesia fell by 48 percent while that of the Philippines fell by 65 percent. Experience like this persuaded many economists to advise newly independent post-war Third World nations everywhere to adopt anti-global and pro-industrial policies (Prebisch 1950; Singer 1950).

Some Good News: Emerging Industrialization

But when their commodity terms of trade fell, the relative price of manufactures rose, thus offering some stimulus to domestic manufacturing firms in the poor periphery. While there were other stimulating forces at work, this one left its mark before the post-war ISI policies were introduced by most of the Third World. Although hardly double-digit performance, constant price manufacturing output was growing faster than constant price GDP in Southeast Asia between 1920 and 1938, at least for four countries that can be documented (percent per annum): Indonesia 2.7 vs 2.6; the Philippines 3.4 vs 2.9; Siam 2.3 vs 2.1; and Burma 2.6 vs 1.4 (Bénétrix *et al.* 2012; Maddison 2007). If these "emerging industrializer rates" seem low, note that they were higher than the leaders' 1.9 percent per annum (the weighted average of Germany, the US and UK). While only modest, they were catching up growth rates just the same and a hint of what was to come after World War 2. Furthermore, it appears to have left its mark on relative GDP per capita growth. Angus Maddison (2008) shows that the century of Southeast Asia Great Divergence 1820-1913 stopped in the interwar years. Between 1913 and 1940, Southeast Asian GDP per capita relative to western Europe remained steady at 0.22, this after that spectacular fall 1820-1913. The Philippines did the best while Burma and Thailand did the worst, but on average Southeast Asia held its own.

More Good News: Falling Inequality, Weakening Colonial Rule

Rental/wage ratios followed the terms of trade collapse – they fell as commodity-price-driven mineral and land rents drifted downward throughout Southeast Asia (Table 4). Between 1890/94 and 1920/24, they fell by 40 percent in Burma and 88 percent in Siam. Up to 1935/39,

they fell by 91 percent in Siam. Falling mineral rents, land rents, and tax revenues from commodity-boom-generated incomes, certainly did not favor the colonialists, their bureaucracy, and the financial condition of their system. Colonialism was losing its motivation.

Lessons of History?

This paper has explored Southeast Asia's trade performance over the four and a half centuries from 1500 to 1940. It appears that income growth of its trading partners determined most of its commodity export performance, while falling trade costs were somewhat less important. It also identified the impact of trade on Southeast Asia's growth performance: trade specialization in commodities generated de-industrialization 1500-1913 (when commodity prices boomed), but it generated some re-industrialization forces 1913-1940 (when commodity prices underwent a secular collapse). Throughout, commodity price volatility inhibited growth. The paper also identifies the distributional impact of commodity export booms and slumps throughout the last century: when commodity prices boomed, inequality rose and colonial power waxed; when commodity prices slumped, equality rose and colonial power waned.

To the extent that industrialization has transformed Southeast Asia since World War 2, and to the extent that Southeast Asia now specializes in labor-intensive manufactures, the historical links between commodity exports, growth, and inequality – forged over 450 years – seem to have been broken.

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Table 1

Five Centuries of European Inter-Continental and World Trade Growth 1500-1992
(% per annum)

1500-1599	1.26	(volume only: 1.26)
1600-1699	0.66	(volume only: 0.11)
1700-1799	1.26	(volume only: 0.90)
1500-1799	1.06	(volume only: 0.76)
1820-1899	3.85	(1990 US$)
1900-1992	3.65	(1990 US$)
1820-1992	3.70	(1990 US$)

Source: O'Rourke and Williamson (2002: Table 1, p. 421).

Table 2 Terms of Trade Boom Across the Poor Periphery: Timing and Magnitude

Region	Starting year in the series	Peak year	Annual growth rate between half-decades start to peak (%)	Annual growth rate between half-decades start to 1886-90 (%)
All Periphery excl. EA	1796	1860	1.431	0.726
European Periphery	1782	1855	2.434	1.234
Latin America	1782	1895	0.873	0.851
Middle East	1796	1857	1.683	0.872
South Asia	1782	1861	0.904	0.037
Southeast Asia	1782	1896	1.423	1.423
East Asia	1782	None	NA	-2.119
European Periphery	1782	1855	2.434	1.234
Italy	1817	1855	3.619	0.697
Russia	1782	1855	2.475	1.335
Spain	1782	1879	1.505	1.264
Latin America	1782	1895	0.873	0.851
Argentina	1811	1909	1.165	1.284
Brazil	1826	1894	1.115	1.067
Chile	1810	1906	0.966	0.140
Cuba	1826	None	NA	-1.803
Mexico	1782	1878	1.096	0.989
Venezuela	1830	1895	0.692	0.677
Middle East	1796	1857	1.683	0.872
Egypt	1796	1865	2.721	1.571
Ottoman Turkey	1800	1857	2.548	1.233
South Asia	1800	1861	0.904	0.037
Ceylon	1782	1874	0.670	0.366
India	1800	1861	0.932	0.024
Southeast Asia	1782	1896	1.423	1.423
Indonesia	1825	1896	3.294	3.335
Philippines	1782	1857	1.480	0.720
Siam	1800	1857	1.534	0.397
East Asia	1782	None	NA	-2.119
China	1782	None	NA	-2.342

Notes: The following countries are excluded from the table's detail since their series begin too late (starting date in parentheses): Portugal (1842); Columbia (1865), Peru (1865), Venezuela (1830); Levant (1839); Malaysia (1882); and Japan (1857). These country observations were used, however, when constructing the regional aggregates and the All Periphery aggregate. Where it says "start", the calculation is the average of the first five years. Where it says "peak", the calculation is for the five years centered on the peak year. The regional averages are weighted by 1870 population. ***Source***: Williamson (2011: Table 3.1).

Table 3

Comparative De-Industrialization: Textile Import Penetration 1800s-1880s, Around the Third World

	Percent of Home Textile Market Supplied by	
	Foreign Imports	**Domestic Industry**
India 1800	-6 to -7	106 to 107
India 1833	5	95
India 1877	58 to 65	35 to 42
Ottoman 1820s	3	97
Ottoman 1870s	62 to 89	11 to 38
Indonesia 1822	18.1	81.9
Indonesia 1870	62	38
Indonesia 1913	88.6	11.4
Mexico 1800s	25	75
Mexico 1879	40	60

Source: Dobado, Gómez and Williamson (2008: Table 4).

Table 9.4 Wage/Rental Ratio Trends in the Third World, 1870-1939 (1911=100)

Period	Land Abundant						Land Scarce	
	Argentina	Uruguay	Burma	Siam	Egypt	The Punjab	Japan	Korea
1870-1874		1112.5		4699.1		196.7		
1875-1879		891.3		3908.7	174.3	198.5		
1880-1884	580.4	728.3		3108.1	276.6	147.2		
1885-1889	337.1	400.2		2331.6	541.9	150.8	79.9	
1890-1894	364.7	377.2	190.9	1350.8	407.5	108.7	68.6	
1895-1899	311.1	303.6	189.9	301.3	160.1	92.0	91.3	
1900-1904	289.8	233.0	186.8	173.0	166.7	99.8	96.1	
1905-1909	135.2	167.8	139.4	57.2	64.4	92.4	110.4	102.8
1910-1914	84.0	117.9	106.9	109.8	79.8	80.1	107.5	121.9
1915-1919	53.6	120.8	164.7	202.1	83.5	82.5	104.9	109.4
1920-1924	53.1	150.3	113.6	157.9	124.3	81.1	166.1	217.4
1925-1929	51.0	150.2		114.9	120.8	72.6	202.4	209.2
1930-1934	58.4	174.3		113.1	116.2	50.4	229.5	194.0
1935-1939	59.5	213.5		121.6	91.0	33.2	149.9	215.4

Source: Williamson (2002: Table 9.4).

Table 5 Terms of Trade Volatility 1865-1939

	1860s-1900s	Relatives	1910s-1930s	Relatives	1860s-1930s
Latin America	***8.916***	***302***	***11.773***	***161***	***10.345***
Argentina	5.314		12.216		8.765
Brazil	14.492		17.380		15.936
Chile	7.216		10.321		8.769
Colombia	15.155		12.038		13.597
Cuba	9.607		13.290		11.449
Mexico	7.461		8.856		8.159
Peru	6.663		8.651		7.657
Uruguay	5.419		11.434		8.427
South & Southeast Asia	***7.780***	***264***	***11.036***	***151***	***9.408***
Burma	6.945		13.463		10.204
Ceylon	15.154		13.044		14.100
India	5.352		9.233		7.293
Indonesia	9.558		6.904		8.231
Philippines	7.823		10.004		8.914
Thailand	8.036		13.569		10.803
East Asia	***7.518***	***255***	***5.879***	***80***	***6.699***
Japan	7.929		5.510		6.720
China	7.106		6.248		6.677
Middle East	***8.039***	***273***	***15.090***	***206***	***11.565***
Egypt	11.863		18.591		15.227
Greece	6.512		15.182		10.847
Serbia	7.983		12.057		10.020
Turkey	5.796		14.528		10.162
European Periphery	***8.195***	***278***	***7.008***	***96***	***7.602***
Italy	14.021		4.349		9.185
Portugal	4.285		8.250		6.268
Russia	9.482		9.318		9.400
Spain	4.990		6.113		5.552
Poor Periphery	***8.090***	***274***	***10.157***	***139***	***9.124***
Three Core Colonizers	***2.948***	***100***	***7.311***	***100***	***5.130***
France	4.038		6.728		5.383
Germany	2.089		7.380		4.735
United Kingdom	2.716		7.825		5.271

Source: Data underlying Blattman *et al.* (2007).
Note: Volatility is measured by the Hodrick-Prescott filter with a smoothing parameter=300. The regional averages are unweighted.

Figure 1. Spice and coffee markups:
Amsterdam vs. Southeast Asia 1580-1939

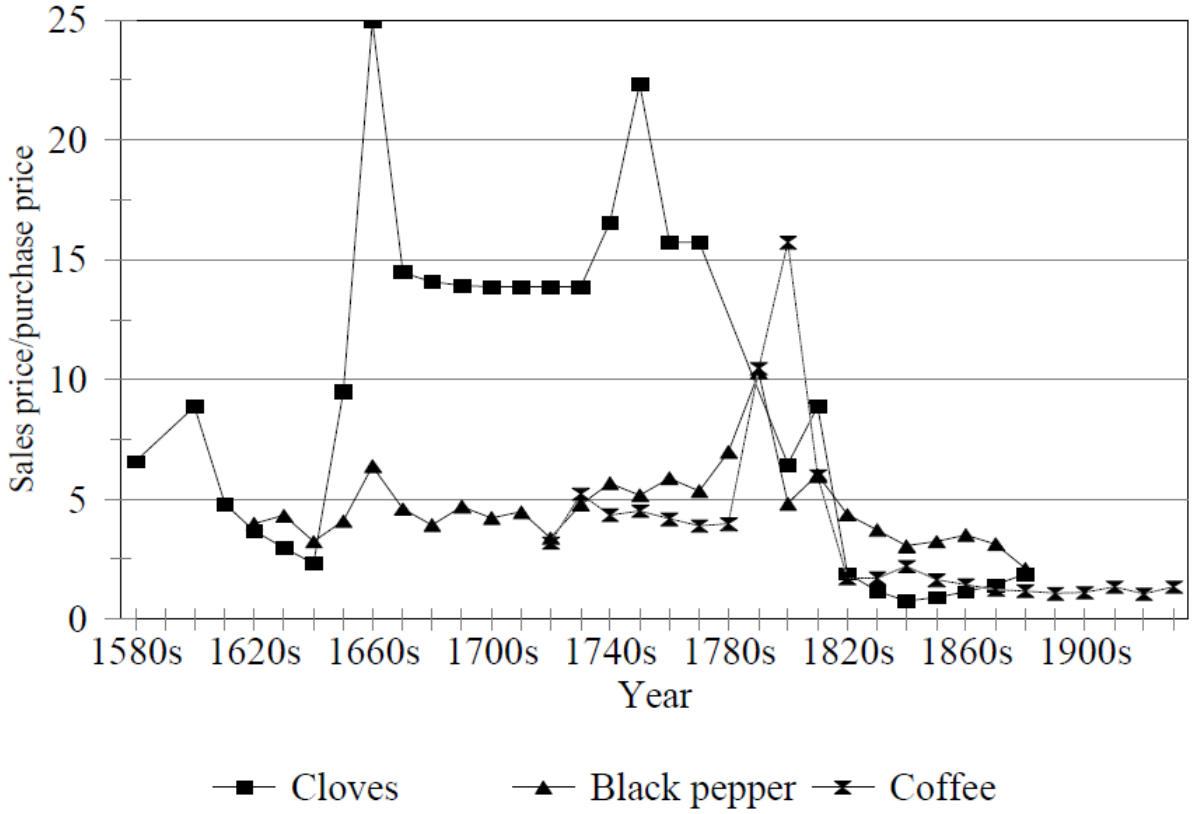
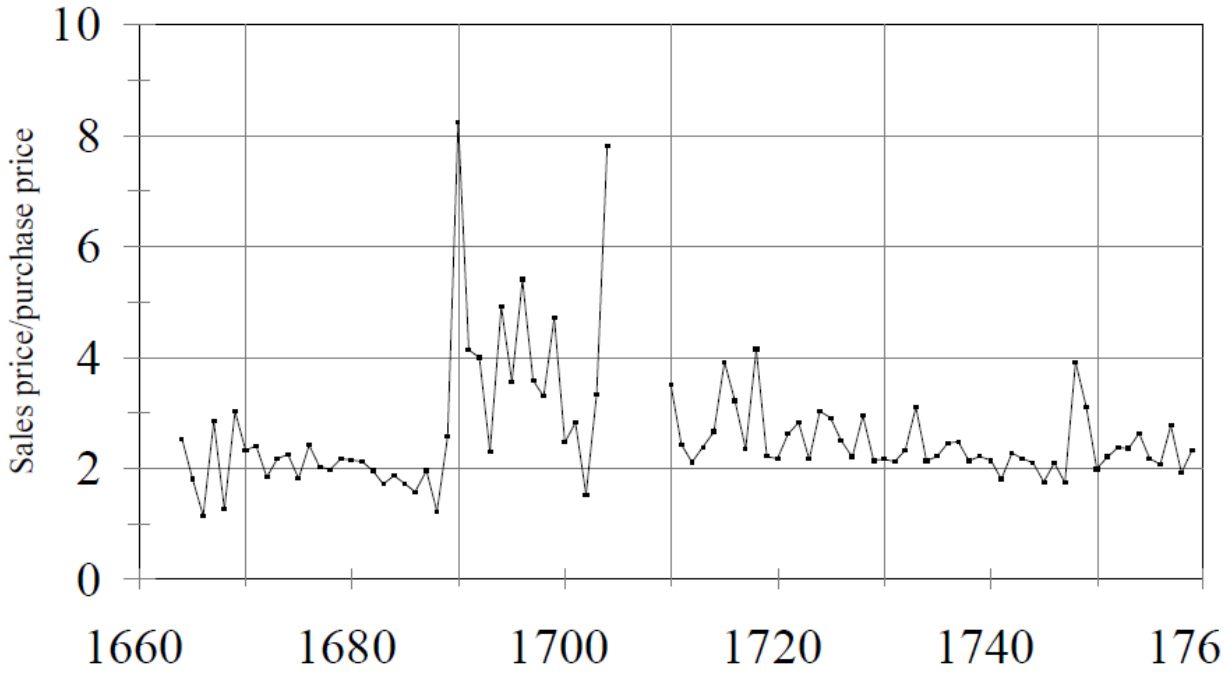


Figure 2. Asian textile trade markups

1664-1759



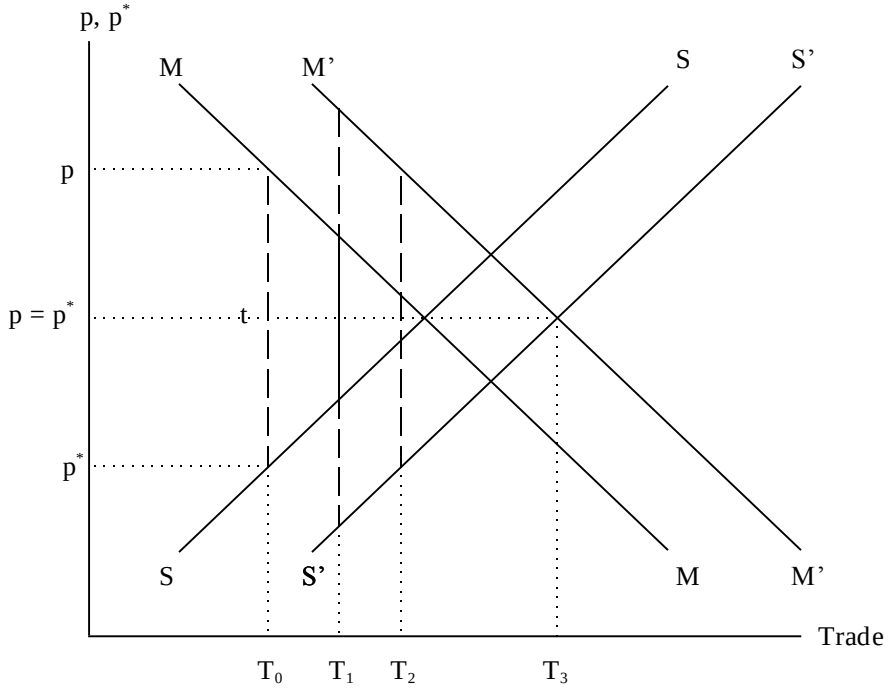


Figure 3. Explaining the world trade boom

Figure 4. The Poor Periphery: Net Barter Terms of Trade 1796-1913