SSOAR

Open Access Repository
www.ssoar.info

Mercantilism and the Rise of the West: Towards a Geography of Mercantilism

Ballinger, Clint

Monographie / monograph

Empfohlene Zitierung / Suggested Citation:
Ballinger, C. (2011). *Mercantilism and the Rise of the West: Towards a Geography of Mercantilism.*. https://nbn-resolving.org/urn:nbn:de:0168-ssoar-318870

Nutzungsbedingungen:
Dieser Text wird unter einer CC BY Lizenz (Namensnennung) zur Verfügung gestellt. Nähere Auskünfte zu den CC-Lizenzen finden Sie hier:
https://creativecommons.org/licenses/by/4.0/deed.de

Terms of use:
This document is made available under a CC BY Licence (Attribution). For more Information see:
https://creativecommons.org/licenses/by/4.0

gesis Leibniz-Institut für Sozialwissenschaften

Mitglied der Leibniz-Gemeinschaft

Mercantilism and the Rise of the West: Towards a Geography of Mercantilism

Clint Ballinger, clintballinger@cantab.net

Working Copy 2011

Section 1: The Problem with Mercantilism

It has become common to note the failure of neoclassical economics to explain economic divergence between countries and regions. In recent years this has frequently been attributed to some countries developing or capturing industries with increasing returns; i.e. that the agglomeration effects typical of increasing returns industries are sensitive to slight differences in initial conditions that over time lead to further agglomeration and thus increasing divergence rather than convergence between regions and countries (Romer 1986, Krugman and Venables 1995, Fujita and Thisse 2002).[1]

Just as the lack of short-term convergence among modern economies can be attributed to the capturing of increasing returns-to-scale activities, many believe Europe (and its settler colonies) did this on a long-term, global scale as well, in a global division of labor at the state and regional level. In the economic history literature this process is sometimes explained in other language, i.e., that Europe deindustrialized its colonies e.g., in dependency theory in general, and works such as Amin 1976, Forbes and Rimmer 1984, and Alam 2000. This long-term, increasing

[1] 'In technical papers written between 1983 and 1986, Krugman observed that the received wisdom about free trade was substantially wrong…"Instead, trade seems to reflect arbitrary or temporary advantages resulting from economies of scale or shifting leads in close technological races." In some cases, Krugman added, comparative advantage can be created. By strategically intervening to capture advantage in industries with technological dynamism, nations could produce spillover benefits for their economies….This revisionism was explosive. It came to be known as the "new view" of trade.' (Kuttner 1996, para. 7-8).

returns perspective is interesting because it can be seen as (regarding reasons proposed for the 'great divergence' in levels of development that economic historians now tell us happened mainly in the last few centuries[2]) merging or at least compatible with both many recent mainstream economic observations related to regional economics, agglomeration, and increasing returns-to-scale activities ('new' trade theory) and aspects of important heterodox arguments (Marxist/dependency theories, some Austrian economics, and much evolutionary economics - related to competition, for example).

How, then, did European states rise in the international division of labor? A frequent answer is that European expansion - 'trading-post', colonial, and imperial expansion[3] - was a crucial cause for many reasons including through windfall effects on Europe's place in world trade (emphasized, for example, by Blaut 1993 and Frank 1998), its effects on avoiding material limits to European growth (e.g., Pomeranz 2000) and its influence on European institutional development (e.g., Acemoglu et. al. 2005).

The State System and Mercantilist Policies

This answer, though, only serves to raise another question: Why, then, was Europe so aggressive at and successful in expansion? Perhaps one of the most commonly shared answers, besides the global exchange of diseases favorable to Eurasians, especially in the Americas,[4] is that the European state system and the competition that

---

[2] It is now generally accepted that much of the divergence between Europe and other advanced economies occurred since the industrial revolution, with Europe no more or even less developed than much of Asia prior to the industrial revolution. This suggests that the divergence is less due to 'internal' or basic sociocultural differences between world regions but rather to more recent processes inherent in worldwide industrialization. However, arguments have been made that the industrial revolution itself is due to earlier, more innate differences between Europe and other regions; Jones 1981 and 1988, among others, use the language of 'internalist' and 'externalist' views of European development.

[3] See Curtin 1989 and 2000 for the important yet often ignored distinctions between stages and types of European expansion.

[4] And - often overlooked - especially *unfavorable* in Africa, greatly changing both the nature and the timing of African/European interaction compared to other regions (Curtin 1989).

it fostered both caused the competitive and therefore aggressive expansion and increased the chances it would be successful, as earlier state competition had increased the technological, military, and bureaucratic capability of European states vis-à-vis non-European states. Indeed, of all of the factors viewed as important to European development, Europe's state system is probably the most widely agreed upon factor: In a recent comprehensive review of the role of the state in 'the rise of the West' P.H.H. Vries notes 'There is hardly a text on the rise of the West in which reference to [the European state system] and its positive effects is not made' (2002, 68) and goes on to list a wide range of scholars from many political orientations: Arrighi (1994), Baechler (1995), Baechler and Mann (1988), Braudel (1979), Cosandey (1997), Crone (1989), Gellner (1988), Goldstone (1991), Hall (1985), Huang (1999), Jones (1981), Landes (1998), Mann (1986a and 1986b), McNeill (1982), Pomeranz (2000), Powelson (1994), Rosenberg and Birdzell (1986), Sanderson (1995), Wallerstein (1974, 1980, 1989), Weiss and Hobson (1995), and Wright (2000).

Even scholars critical of arguments that seem to privilege the West or capitalism emphasize the importance of the state system in Europe's unique development trajectory. For example, Anthony Giddens writes that 'However much one might distrust the nature of the contrast drawn between Europe and the "despotic" East by Montesquieu and his contemporaries, there is no question that the character of Europe, as a series of socio-political formations, differed over the long term from the imperial societies of Meso-America, the Near and Far East. During the sixteen hundred years or so which succeeded the disintegration of "its" empire, Rome, Europe did not experience the rise of another imperial society in its midst…Europe was a "state system" for the whole of this period' (Giddens 1981, 183). The fact that these scholars disagree on so many other points related to development yet are in basic agreement concerning the centrality of the European state system to Europe's unique development trajectory suggests that there is indeed something important about this factor.

All of the above authors argue in part or entirely that:

- The military technology and capacity of European states (particularly vis-à-vis non-European regions) was enhanced through war or the threat of war. This would become highly relevant once colonization became a competition between European states.

- The bureaucratic capacity of European states was enhanced through war or the threat of war.
- Political competition led to economic and territorial competition, exploration, and expansionist policies.
- State competition (and a large number of states and high degree of trade) increased the chances that early trading-post and colonial (and later imperial) expansion world occur in the first place.

The competitive policies towards technological development, trade and acquisition of raw materials for manufacturing were sometimes ill-defined and erratic, but nevertheless the very real policy among European states starting as early as the 1500s and lasting for centuries (Reinert 1994, 1995, 1998). These policies can broadly be described as (or said to define) mercantilism (and colbertism and cameralism in the French and German traditions, which would also strongly influence Japan, the US, and other nations); as Schmoller describes the mercantilist system: 'The essence of the system lies not in some doctrine of money, or of the balance of trade; not in tariff barriers, protective duties, or navigation laws; but in something far greater: - namely in the total transformation of society and its organizations, as well as of the state and its institutions, in the replacing of a local and territorial economy by that of the national state' (Schmoller 1896 from Reinert 2004, 10).

Mercantilism – Rejected by both the Left and the Right

Mercantilism has received very little attention in the twentieth century,[5] and much of the attention it has received has often used mercantilism as a straw-man against which to present other theories in a good light, with numerous misrepresentations often intentionally introduced. This has led to widespread acceptance of simplistic and erroneous views of mercantilism which in turn still further decreases attention to the subject. Paul Rich states that 'There are few better examples of trying to lend misleading coherence to complex matters than the way in which mercantilism has been dismissed as a spent philosophy' (Rich 2006, 183).[6]

Mercantilism seems to have been ignored and even disparaged by both the right and the left, accounting for the scant attention paid to the historical impact of these

---

[5] Mokyr, for example, in discussing Heckscher's (1931) extensive treatment of mercantilism, observes 'the book seems to have been strangely neglected by economic historians in recent decades. Mercantilism as a major topic in the institutional development of Europe has not yet been taken up by the New Institutional Economics.' (Mokyr 2003, 1). In a footnote Mokyr notes: 'Of the forty five references to Heckscher's work on Mercantilism in the two leading Economic History journals, thirty five were made before 1971, and only four since 1980. Of the thirteen citations in the entire economics and history sections of JSTOR to Heckscher's work on Mercantilism, only five papers qualify as economic history proper. A recent well-reviewed book (Epstein, 2000), clearly concerned with similar issues, does not even refer to it. (Mokyr 2003, 1). McCusker writes 'Indeed, by mid-century, some were prepared to deny that mercantilism as an economic doctrine had ever existed' (McCusker 2000, para. 1) and that after World War II 'mercantilism was irrelevant. After the demise of the world of nation states, it seemed to some best forgotten and, with it, the doctrine that had served to underpin its foundation. By the middle of the twentieth century more than one writer on the early modern period of Western European history was prepared to deny mercantilism's very existence. … The most extreme of these writers, D. C. Coleman (1980, p. 791), classed mercantilism with other "non-existent entities."'. (McCusker 2000, para. 10).

More generally, if all of the JSTOR articles from history, political science, and economics from the entire twentieth century and to the present with any of the words 'mercantilism', 'colbertism', or 'cameralism' in the title are considered, there are only 46 articles, of which only 12 have been published after 1980 (the date of Coleman's 'Mercantilism Revisited'), and these are mostly either narrowly focused responses to Ekelund and Tollison's (1982) public choice interpretation of mercantilism or discussions of modern trade theory as 'neo mercantilism'.

[6] McCusker, for example, in discussing one of the few modern widely read discussions of mercantilism notes: 'Unfortunately in their exploration of the subject Ekelund and Tollison offer little more than "poor history," "circular arguments," and a disinterest "in what the mercantilist writer actually wrote," according to Magnusson (p. 50), an evaluation with which I can only agree, sadly' (McCusker, note 8).

policies in the twentieth century. The left, while embracing the state's role in development, rejects the capitalist and 'internalist' (and often, viewed as triumphalist) view of Europe as a region developing economically largely due to internal institutional development stimulated by its own internal dynamics of intra-state competition and commerce.[7] Conversely, the right, while embracing the emphasis of mercantilism on a 'fragmented and thus competitive' internalist model of European expansion, cannot embrace mercantilism because of its emphasis on the role of the state in development. Thus mercantilism has found little support or attention in the twentieth century from any side.[8]

---

[7] Even in its 'neo' form mercantilism is criticized for its association with capitalism from the left. Lovering 1999 sees 'new-regionalism' as a form of neo-mercantilism and criticizes it accordingly as 'instrumentalist' 'Hayekian rhetoric'. Simply (mis)applying the word to a description of policy automatically paints the policy in a bad light; e.g. '[Texas Governor] Perry's economic vision is the kind of race-to-the-bottom mercantilism we've come to expect from developing nations in the globalized economy…' (Meyerson 2011. The term is misapplied because capturing particular sectors of increasing returns industry and thus raising the wealth of a region or state was traditionally the goal of mercantilist policies, not reducing living standards to indiscriminately attract sectors that enrich a minority capitalist class).

[8] McCusker makes a similar argument in discussing the reception of Heckscher's (1931) book on mercantilism: 'The book and its subject had less play in the second half of the twentieth century when the worries of the world shifted from a fear of totalitarianism of the right to a fear of totalitarianism of the left. Indeed, by mid-century, some were prepared to deny that mercantilism as an economic doctrine had ever existed' (McCusker 2000, para. 1)

and

> As World War II came and passed, many thought they saw the future in an even newer and now victorious doctrine, socialism. For them Heckscher was even less relevant - or, better put, mercantilism was irrelevant. After the demise of the world of nation states, it seemed to some best forgotten and, with it, the doctrine that had served to underpin its foundation. By the middle of the twentieth century more than one writer on the early modern period of Western European history was prepared to deny mercantilism's very existence. … The most extreme of these writers, D. C. Coleman (1980, p. 791), classed mercantilism with other "non-existent entities." It was an invention, conjured up "to prevent the study of history from falling into the abyss of antiquarianism" (7). With hated capitalism under attack from the bastions of academe, mercantilism suffered the even worse fate of being ignored. (McCusker 2000, para. 10).

Consequently, there are a number of widespread misunderstandings concerning mercantilist policies. One is that mercantilism is simply a naïve focus on the balance of trade (or worse still, as an even more simplistic focus on the stock of precious metals, properly called 'bullionism'). The mercantilist approach to trade and development was in practice much more nuanced, based on views on 'good' trade and 'bad' trade. Good trade is trade that increases the amount of increasing returns activities (in that time especially, essentially manufacturing) within a country's borders; bad trade is trade that increases a reliance on raw materials exports (see Reinert 1998). Crucially, much confusion also arises because of the difference in the significance of arguments concerning trade originating in the context of the country by far more industrialized (Great Britain, and later, also the US) and the significance of those arguments for everyone else: In the real world, the implications of 'free' trade turned out to be very different for the world leaders in industrial production than for less industrialized nations. It has seldom been grasped how fundamentally this influenced the interpretation of economic theory in different countries, especially in the English speaking countries vis-à-vis the rest of the world (Reinert 1998).

Mercantilism and the Zero Sum game fallacy

Another misunderstanding concerning mercantilist policies is that they are frequently portrayed as attempting to capture trade and industry due to a naïve belief that these are a 'zero sum game' when in reality trade and industrial growth are very much a *non*-zero sum game, with cooperative free trade increasing the total amount of goods for all. Mercantilists are portrayed, in effect, as believing (in their ignorance of the non-zero sum nature of development) that if considering two countries starting on equal terms, taking one country's ten percent meant the winner would have sixty percent and the loser be left with forty percent of the pre-existing trade or industry levels, and ignorant of the possibility that with increased trade there may be 500 percent more goods and industry in the future for all to share.

However, in a non-zero sum world *strongly marked by agglomerative forces* (whatever these may be), mercantilist strategies make *more*, not less sense than non-competitive policies: that is, taking a rival's ten percent now might leave the 'winner' with the lion's share of the 500 percent more trade/industry in the future, and the loser with almost none, a more likely outcome in the real world of agglomeration than each

ending up with greater *equal* amounts of growth. Crucially, in a non-zero sum world of increasing returns and agglomeration, mercantilist strategies were especially astute and beneficial, although only, of course, for the 'winners'.

Based on these observations this work might be described as a 'geography of mercantilism' that seeks to understand how mercantilist policies, so intricately associated with both the military and commercial expansion of Europe that subsequently shaped global patterns of development, became spatially 'centered', as writers such as Blaut and A.G. Frank often characterize the process, on Europe.

Section 2: An Empirical View of the Spaces of Mercantilism

2.1 Introduction

There seem to be at least three factors that are necessary for mercantilist policies to develop in a world region: 1) There must be a high *amount of trade* 2) there must be a sufficient *number of states* to stimulate competition among them 3) they must be sufficiently *centralized*, *bureaucratically effective* states. Without (1) there would be little to gain from mercantilist policies, without (2) there would be little motivation to be competitive and no competitors from which to gain, and without (3) there would be no way to effectively *implement* competitive policies.

Although aspects of these relations have been discussed many times, there is now more and better spatial data that allows for these questions to be considered empirically more fully, and in particular, the spatial distributions of these social processes to be explained better than in the past, taking out the circularity inherent in aspatial discussions of development (Ballinger 2008e).

Part II of this paper uses empirical data to better understand the global distribution of mercantilist policies.

First we examine modern data that shows that in the modern economy there is a close connection between economic development and the types of economies mercantilists believed to be conducive to economic growth.

We then consider the three factors listed above. Instead of anecdotal stories, we search for data on that shows the relative potentials of different parts of the world to have high levels of trade, a large number of states, and the bureaucratically effective states.

Why world regions? First, mercantilism ony makes sense within a group of polities. Second, disparities in economic development are most pronounced at the world regional level, with greater variation between world regions than within them. (Ballinger, 2011x).

2.2 Modern Economies and Mercantilism

Before exploring the historical relationship between increasing returns industry and development, it is useful to measure the modern relationship of the ratio of increasing returns production (manufacturing) and decreasing returns production (primarily agriculture; see Reinert 1996) and measures of development such as gross national income.

This can be done using the schema for classifying the development levels of countries developed by Hoeschele (2002). Rather than judging development on a one dimensional measure such as GDP, it is useful to use several dimensions reflecting important aspects of an economy. Measuring the balance between increasing returns sectors and decreasing returns sectors is one method that gives a clearer indication of *types* of economies, beyond just their wealth.

Using data on manufacturing sectors from the United Nations Department of Economic and Social Affairs (the Standard International Trade Classification or SITC) Hoeschele develops a measure of core industrialized manufactures (CIM - textiles, metals manufactures, chemicals, paper and paper products) and natural resource intensive agricultural and mining products (NRI - basic metals, foods, beverages tobacco, wood and wood products). Using data from the Food and Agriculture Organization (FAO) Hoeschele develops a measure of the non-agricultural population of countries. Countries are plotted against each other using these measures, and Hoeschele then divides them into six categories.[9] These are

---

[9] Hoeschele's original division is modified here to approximate a lognormal distribution and equalize the number of observations in each category. Interestingly, this division shows the data to closely match the world regional divisions discussed in Ballinger 2008g.

IC (*I*ndustrialized, *C*ore industrial manufactures exporting)

IN (*I*ndustrialized, *N*atural resource intensive exporting)

PIC (*P*artially *I*ndustrialized, *C*ore industrial manufactures exporting)

PIN (*P*artially *I*ndustrialized, *N*atural resource intensive exporting)

LIC (*L*east *I*ndustrialized, *C*ore industrial manufactures exporting)

LIN (*L*east *I*ndustrialized, *N*atural resource intensive exporting)

In Figure 1 the x-axis measures the percentage of non-agricultural population in a country, while the y-axis measures the percentage of industrial exports.[10]

[10] The extreme outlier 'np' is Nepal; its unique position is due to the dominance of its small economy by textile exports (98%). Pakistan (pk), Bhutan (bt), and Bangladesh (bd) have similar economies, although less extremely focused on a single industry.

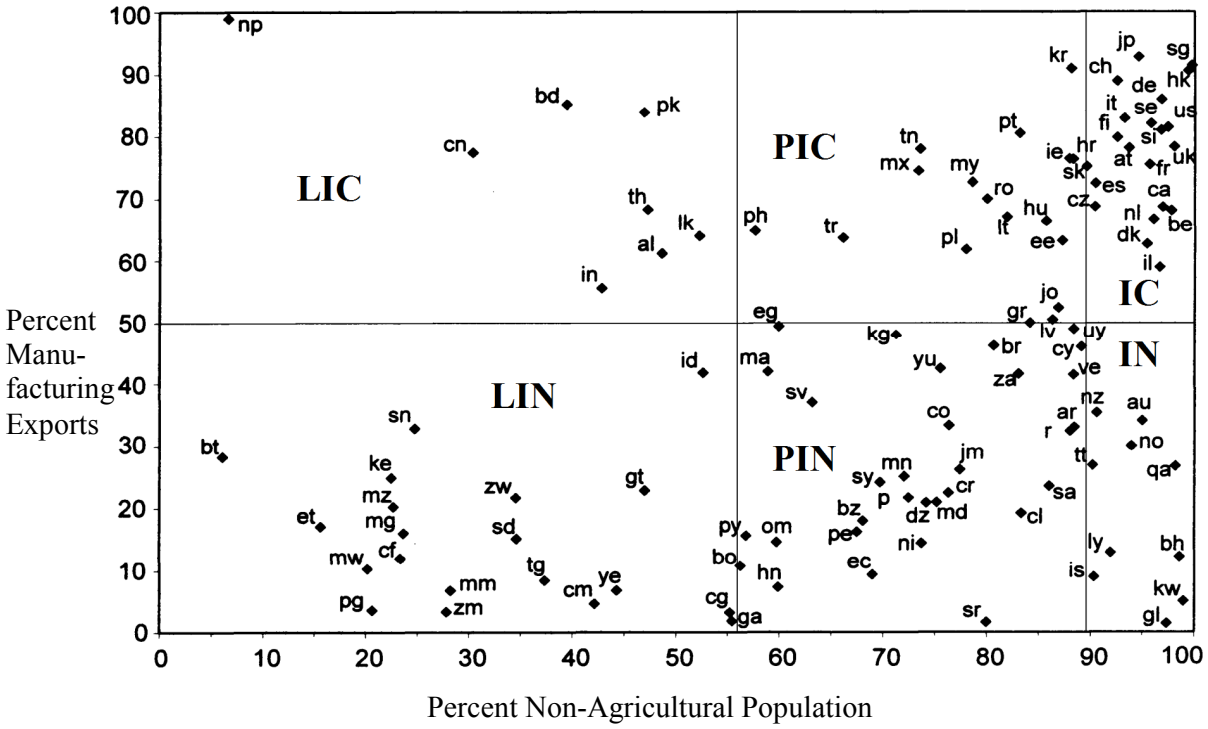


Figure 1 Hoeschele's Alternative Classification of Economies
Source: Adapted from Hoeschele 2002

Abbreviations (Internet domain names of countries)

al Albania
ar Argentina
at Austria
au Australia
bd Bangladesh
be Belgium
bh Bahrain
bo Bolivia
br Brazil
bt Bhutan
bz Belize
ca Canada
cf Central African Republic
cg Congo
ch Switzerland
cI Chile
cm Cameroon
cn China
co Colombia
cr Costa Rica
cy Cyprus
cz Czech Republic
de Germany
dk Denmark
dz Algeria
ec Ecuador
ee Estonia
Eg Egypt
es Spain
et Ethiopia
fi Finland
fr France
ft Trinidad and Tobago
ga Gabon
gl Greenland
gr Greece
gt Guatemala
hk Hong Kong
hn Honduras
hr Croatia
hu Hungary
id Indonesia
ie Ireland
il Israel
in India
is Iceland
it Italy
It Lithuania
jm Jamaica
jo Jordan
jp Japan
ke Kenya
kg Kyrgyzstan
kr South Korea
kw Kuwait
lk Sri Lanka
lv Latvia
ly Libya
ma Morocco
md Moldova
mg Madagascar
mm Myanmar
mn Mongolia
mw Malawi
mx Mexico
my Malaysia
mz Mozambique
nI Netherlands
ni Nicaragua
no Norway
np Nepal
nz New Zealand
om Oman
pa Panama
pe Peru
pg Papua New Guinea
ph Philippines
pk Pakistan
pl Poland
pt Portugal
py Paraguay
qa Qatar
ro Romania
ru Russia
sa Saudi Arabia
sd Sudan
se Sweden
sg Singapore
si Slovenia
sk Slovakia
sn Senegal
sr Suriname
sv El Salvador
sy Syria
tg Togo
th Thailand
tn Tunisia
tr Turkey
uk United Kingdom
us United States
uy Uruguay
ye Venezuela
ye Yemen
yu Yugoslavia
za South Africa
zm Zambia
zw Zimbabwe

The Hoeschele classification of economies can be used to judge the relationship between urbanization/industrial exports and material well-being. Table 1 (next page) is divided into six columns representing the six divisions in Hoeschele's measure. The shaded columns represent the three upper categories in Figure 1 (IC, PIC, LIC). The white columns represent the three bottom categories (IN, PIN, LIN). The columns are divided into five rows representing low, medium-low, medium, medium-high and high measures of Gross National Income (World Bank 2002).

This table allows for the comparison of countries based on both their level of development and their types of economies. The primary importance of this data is that it suggests that in the modern economy, having both a more urbanized economy and more industrial exports is especially associated with greater wealth, although each in somewhat different ways. (Compare the LIN and IC nations, and the IN and LIC nations – Ethiopisa and Papua New Guinea against Japan and France. The first are agsiciltural and export very little, the latter export a great deal and are highly urbanized. China, Bangladesh, Pakistan against Australia, New Zealand, and the oil exporting countries. The first export, percentagewise, a great deal but remain highly rural; the latter export a great deal and are highly urbanized.

A country can still be highly rural yet have a high percentage of exports; it will be significantly more wealthy than comparable non- exporters (compare China and Pakistan to Ethiopia and Papua New Guinea). Like a country can be highly urbanized yet export a relatively small (New Zealand, Australia, Iceland) it will be often be significantly more wealthy than comparable percentage exports but non-urbanized Senegal, Bhutan.

Table 1 Gross National Income and the Hoeschele Classification
(next page)

Source: Data from Hoeschele 2003; GNI data are from the World Bank, 2002

	IC	IN	PIC	PIN	LIC	LIN
High GNI 17350+	Switzerland Germany Austria Italy France Spain Netherlands Sweden Finland Denmark U.K. U.S.A. Canada Israel Japan Singapore Hong Kong	Norway Iceland Greenland Australia New Zealand Kuwait	Ireland Greece Portugal	Cyprus		
Med-High GNI 6650-17350		Bahrain Trinidad and Tobago	Hungary Slovakia Czech Republic Poland Estonia Latvia Croatia Korea Malaysia Mexico	Russia Yugoslavia Brazil Uruguay South Africa Saudi Arabia Oman	Thailand	
Medium GNI 4280-6649			Romania Turkey Tunisia Philippines	Venezuela Colombia Peru El Salvador Paraguay Belize Egypt	Algeria China	Gabon
Med-Low GNI 1650-4279			Jordan	Ecuador Honduras Bolivia Morocco	Albania Sri Lanka Pakistan Bangladesh	Guatemala Indonesia Sudan Zimbabwe Papua/New Guinea
Low GNI Below 1650				Moldova Kyrgyzstan Mongolia	Nepal	Congo Cameroon Togo Zambia Senegal Kenya Madagascar Central African Republic Malawi Ethiopia Yemen

Towards a Geography of Mercantilism

Critically, the relationship demonstrated in Table 1 seems to hold historically as well. Economic growth is closely associated with mercantilist policies in industrialized countries over a period of centuries (Bairoch 1993; Reinert 1994, 1996; see also Williamson 2002. Similar arguments are found in Jacobs 1984 especially on the misunderstandings of the rejection of import substitution; Masters 1988 shows the results of European mercantilist policies historically against an area of free trade in the Ottoman Empire; there are, of course vast and closely related literatures on the usefulness of import replacing and protectionism, globalization, and free trade). Economic historian Paul Bairoch states 'It is difficult to find another case where the facts so contradict a dominant theory than the one concerning the negative impact of protectionism; at least as far as nineteenth-century world economic history is concerned. In all cases protectionism led to, or at least was concomitant with, industrialization and economic development. Also, in the four examples of liberalism, three had negative or very negative consequences.' (Bairoch 1993, 54).

The question I will seek to address empirically is: If economic growth is associated with mercantilist policies historically, and the concentration within a state's borders of increasing returns industries both historically and in modern data, what has caused the *spatial* distribution of mercantilist policies? This is important because it seems that the historical spatial distribution of mercantilist policies underlies the modern distribution of development.

2.3 Condition One: Number of States

As noted in the introduction to Part Two, the three conditions for a mercantilist system to develop are a large number of states in close interaction, and sufficiently centralized, a large amount of trade, and bureaucratically effective states. Without the first condition there is no one from which to gain anything. Without the second there is not enough to be gained. And without he third there is no way to implement mercantilist polices.

There are of course many factors that can conceivably influence the number of states in a region. Some regions are dominated by single large empires for long

periods of time, others by many smaller competing polities, and others are essentially stateless for long periods and over large areas. Different world regions differ radically on the number of states with perhaps two of the strongest factors influencing this number being the antiquity of state development and the degree to which large empires formed. We will consider the historical-political considerations below. However, besides the real world historical considerations, *ceteris paribus*, another important factor is simply size – the larger the area the greater the possibility for more nations. This is especially true given the fact that there were strong limitations on effective state-sizes due to transport and communication limits in pre-industrial times.

Ignoring for the moment other historically contingent factors, which world regions were the largest?

Definition of ecumene

then

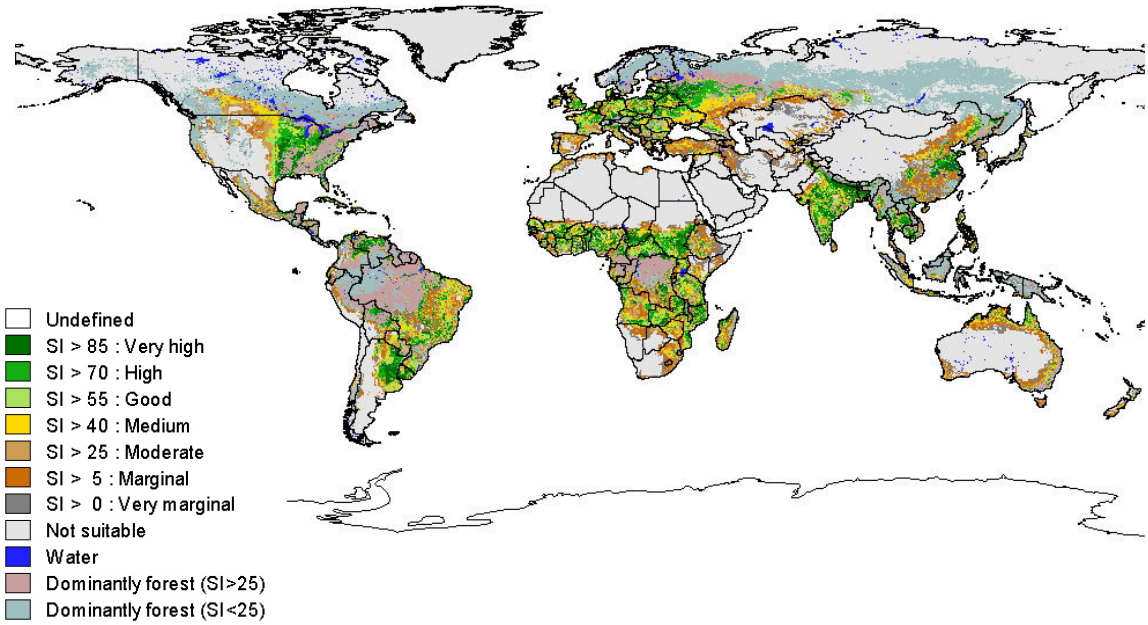
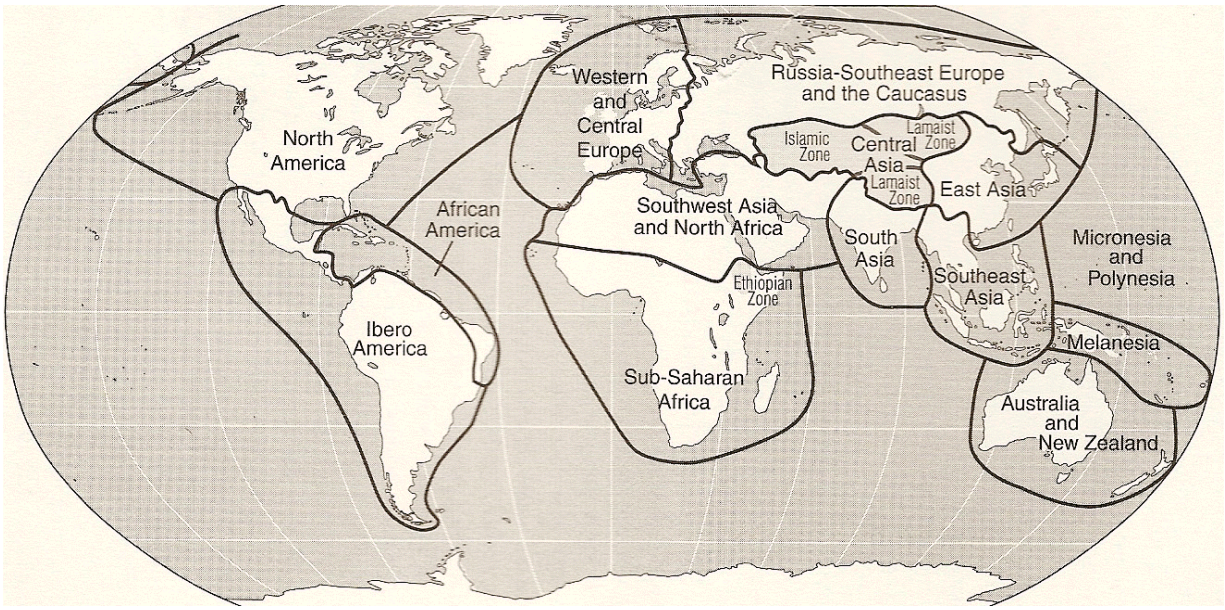


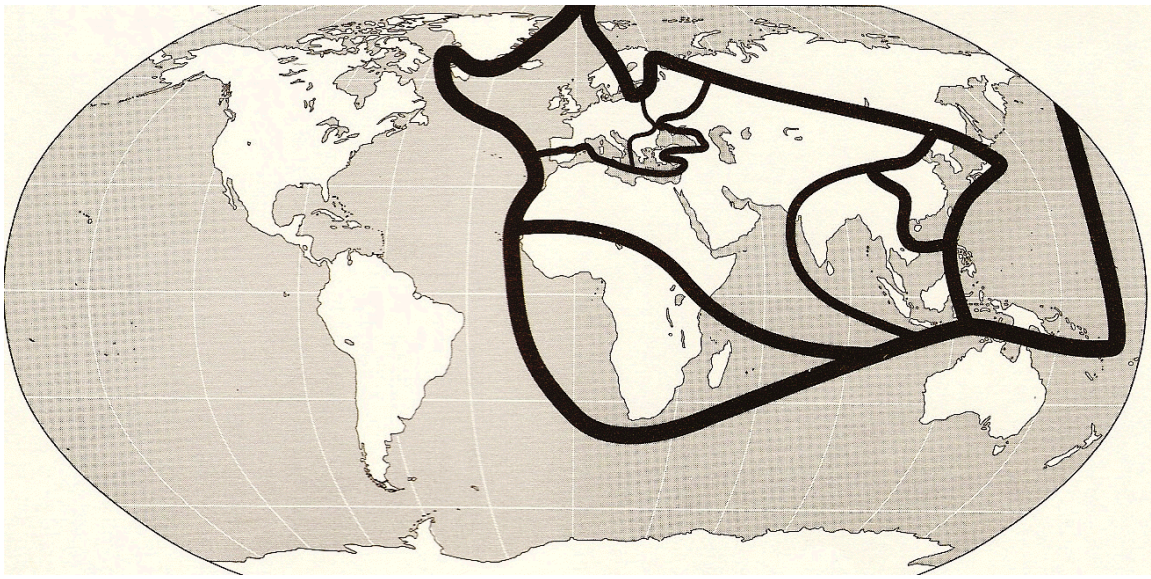
Figure 4 Suitability for Rain Fed Crops Excluding Forest Ecosystems[11]

[11] This includes maize, a non-Eurasian crop; however, (with inspection of related GAEZ data) it is representative of the relative fertility of the regions concerning the main crops, wheat, barley and rye in Europe, and rice and millet in China; if anything, China and India are overrepresented with the addition of maize as they are better suited to maize production than Europe (even including the Mediterranean; see the appropriate GAEZ plates on the IIASA website).

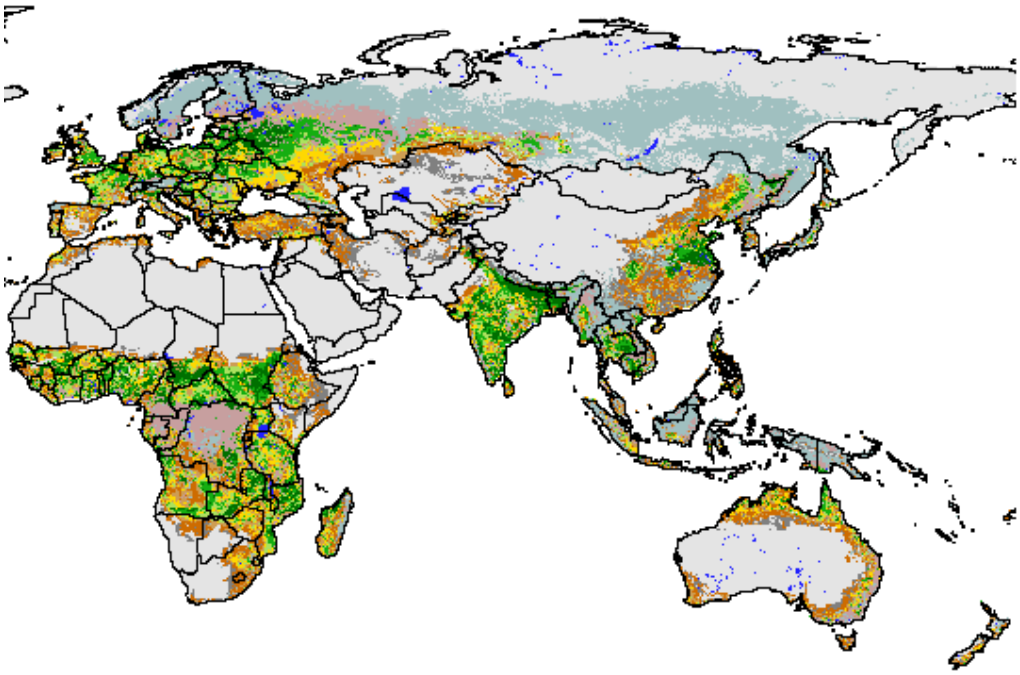
Source: Global Agro-Ecological Zones (GAEZ) from the Food and Agriculture Organization of the United Nations (FAO) with the International Institute for Applied Systems Analysis (IIASA)

Number of competing world regions - South America, North America, Sub-Saharan Africa, western Eurasia ('Europe' and the Mediterranean litteoral east to destersts of central Eurasia), South and East Asia, and to some degree Australasia.





other Eurasian ecumene.



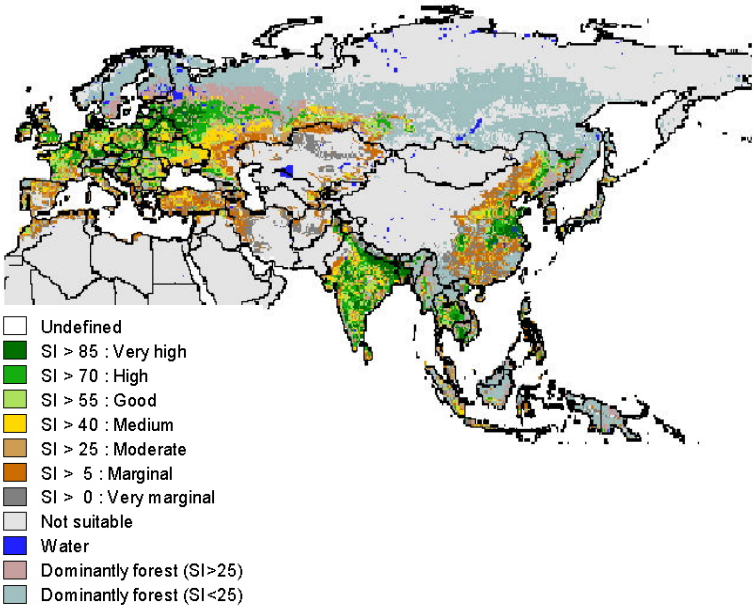


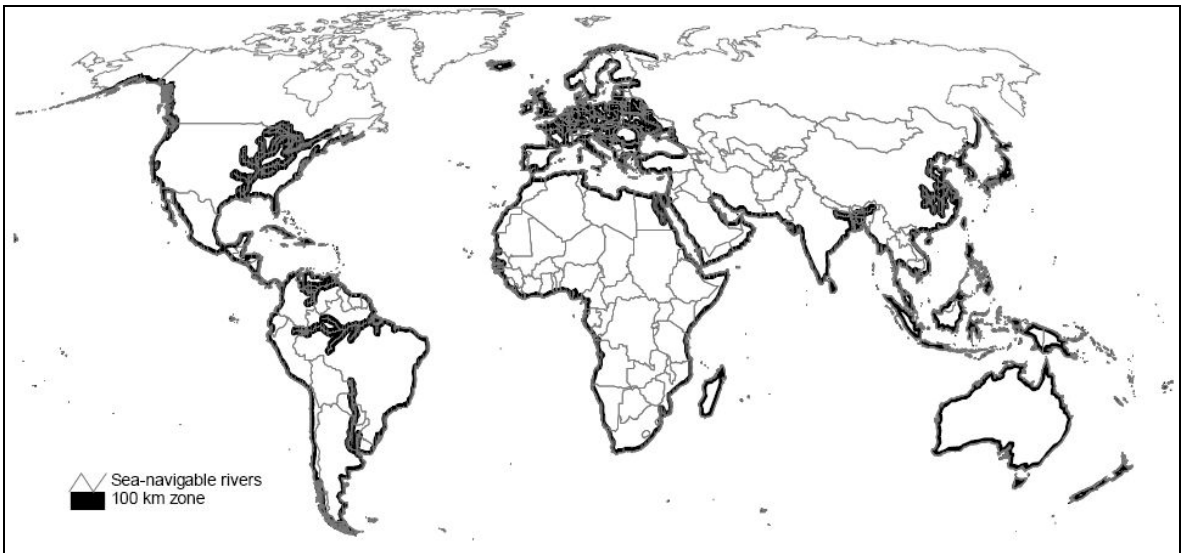
Figure 5 Eurasia - Suitability for Rain Fed Crops Excluding Forest Ecosystems
Source: Global Agro-Ecological Zones (GAEZ) from the Food and Agriculture Organization of the United Nations (FAO) with the International Institute for Applied Systems Analysis (IIASA)

2.4 Transport Costs and Regional Trade Potential

One of the key factors shaping the historical distribution of world-regional trade is transport costs. Mellinger, Sachs, and Gallup (1999) and Rappaport and Sachs (2001) collect data that shows the close historical and modern association of low transport costs with high levels of trade and industrial agglomeration. Some of their data is easily visualized and shows the close relationship between transport costs and spatial patterns of high trade and economic development. For instance, Mellinger, Sachs, and Gallup map data on the transport capacity of world rivers. Taking coasts and ocean navigable rivers and highlighting the areas within easy land-transport range (100 kilometers) of these provides a good picture of the relative transport cost potentials of world regions. This transport-cost data can then be usefully compared to other extensive data, such as global GDP density.

In recent decades detailed and accurate maps of the density of global economic production have been developed (a reflection of both the population density and

economic productivity of a region). Comparing transport-cost data and GDP density measurements reveals the long-term influence of transport-cost potentials on cumulative levels of population and economic activity (spurious correlation or reverse causation are ruled out by the many detailed historical accounts of the mechanisms linking transport costs with both population growth and economic and industrial location). In Figure 2 the upper section highlights in black 100 kilometers inland of ice free coast and on both sides of ocean navigable rivers. Directly below it is a modern detailed map of global GDP density. Note the close spatial correlations between the factors.



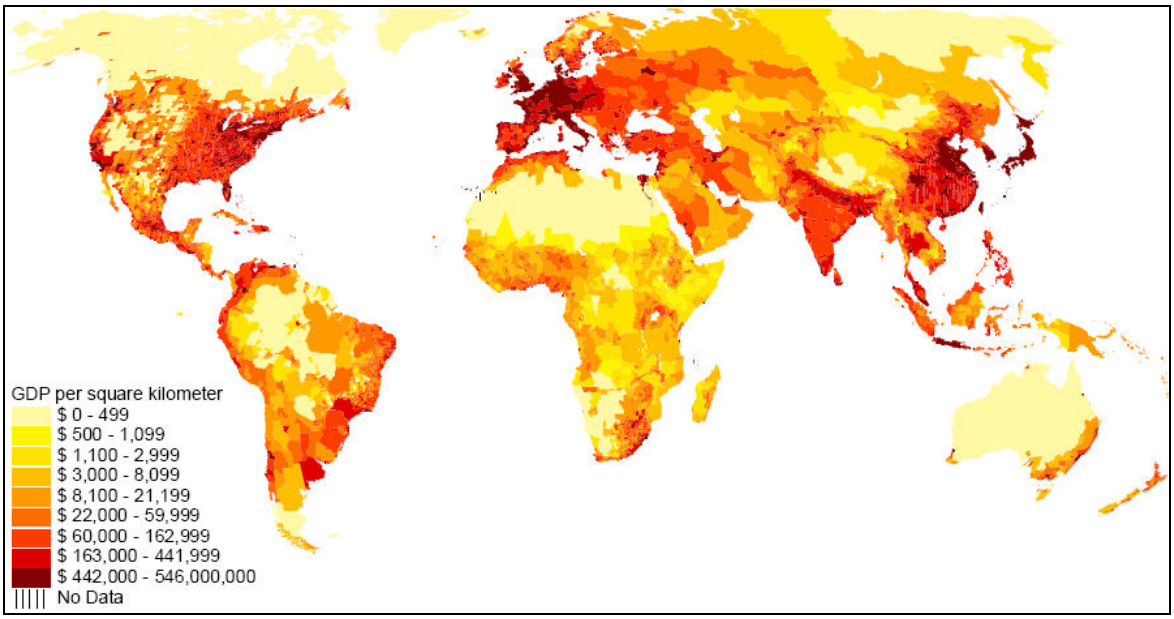
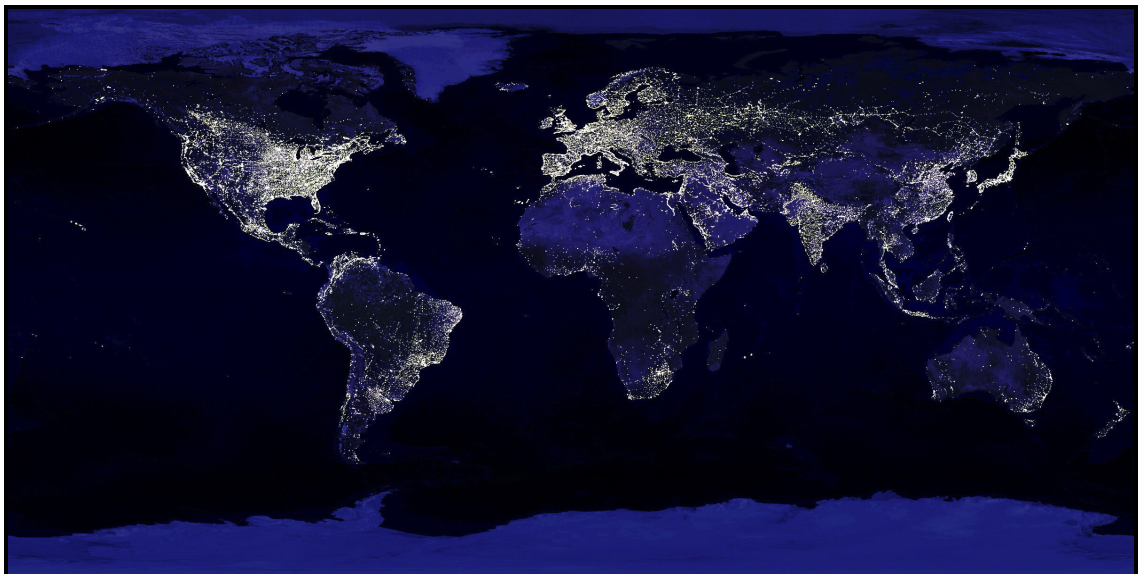


Figure 2 Global Water Transport Potential and GDP Density
Sources: Mellinger, Sachs, and Gallup 1999

The statistical methods of measuring GDP density used in Figure 2 may be inaccurate for a number of reasons, with two especially important limitations being 1) the estimated two billion people, especially in rural areas and developing countries, which remain outside of the formal economy and 2) that areas with high levels of economic activity such as commercial centers, warehouse districts, industrial zones, and airports have low resident population densities. A useful method for correcting these problems is to *directly* measure the spatial distribution of economic activity using measures of nighttime light emissions, which serve as an especially accurate spatial indicator of both the distribution and intensity of economic activity (Doll et al. 2000; Sutton and Costanza 2002). Below (Figure 3) is a photograph of global light emissions, again compared with a map showing the 100 kilometer zone of coasts and ocean navigable rivers (this time using a negative of the image for easier comparison with the light emissions image).



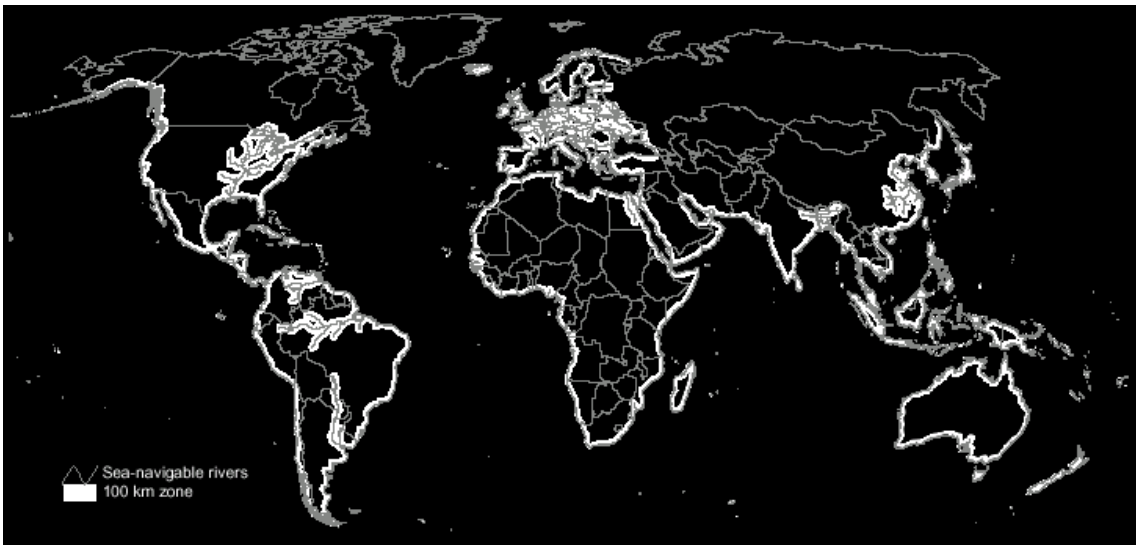


Figure 3 Global Light Emissions Compared with Land Within 100 Km. of Ocean Navigable Water
Source: NASA (top) and Mellinger, Sachs, and Gallup (1999, 28)

Again the close correlation between the exceptionally low transport costs associated with water transport and the density of economic activity are evident, suggesting the effects of long-term and cumulative causation of transport costs on population and industrial agglomeration.

Just as there is now much more extensive, accurate, and detailed data available to consider older arguments on relationships between transport costs, trade and development (the first factor mentioned as necessary conditions for mercantilist policies to develop) there is likewise data that might be used to revisit arguments concerning the *number* and *strength* of states in world regions (the second and third factors mentioned as necessary for mercantilist policies to develop). Much of this data is also usefully visualized with descriptive statistics and maps.

&&&&&&&&&&&&&&&&&&&&&&

Recent global yet detailed data, such as the Global Agro-Ecological Zones (GAEZ) data[12] has been developed that shows distributions of agricultural potential. GAEZ measures numerous important factors with thousands of observations at 1

[12] The Global Agro-Ecological Zones (GAEZ) from the Food and Agriculture Organization of the United Nations (FAO) with the International Institute for Applied Systems Analysis (IIASA).

degree by 1 degree scales or smaller including critical data on daily precipitation, seasonal variations in precipitation, evapotranspiration rates, frost days, terrain slopes, soil depth, soil fertility, soil chemistry, soil drainage, and soil texture. These factors have been combined to precisely delineate the spatial patterns of agriculturally productive land for many of the world's most important crops and crop types (grains, root crops, oil crops etc.). Taken together, these measurements allow for a far more detailed yet at the same time spatially extensive consideration of variations in world regional agricultural potentials.

Although developed primarily to estimate potential world food supplies and mitigate famine, this data can also be used to show that there are indeed dramatic differences and clear patterns to world regional potentials for food production. This is important because some, such as Blaut (1993, 2000, who in turn is frequently cited, e.g. Robbins 2003) reject development arguments that are based on differences in agricultural productivity. Blaut selectively uses data to refute earlier arguments of this type; more modern, detailed and spatially extensive data clearly shows that Blaut's arguments are either incorrect or misleading (i.e., there are, as Blaut claims, areas of productive tropical soils; this does not mitigate the fact that overall there are serious problems with and drawbacks to tropical agriculture). Many parts of the world clearly do suffer from important limitations and temporal instabilities (Davis 2002) of food production potential, while others have unusually high and stable capacities for food production.[13] Increasingly, work such as Sachs 1997, Gallup et. al. 1999, Masters and McMillan 2000, Masters and Wiebe 2000, and Masters and Sachs 2001 show mechanisms whereby food production stability and potential (and other geographic factors) directly and indirectly impact social and economic development outcomes,

---

[13] Based on modern soil, terrain and climate data the GAEZ researchers note 'that more than three-quarters of the global land surface (excluding Antarctica)… suffer rather severe constraints for rain-fed cultivation. Some 13 percent is too cold, 27 percent is too dry, 12 percent is too steep, and about 65 percent are constrained by unfavorable soil conditions (percentages do not sum up to 100, because different constraints coincide in some locations). The analysis concludes that only 3.5 percent of the land surface can be regarded to be entirely free of constraining factors. Only for some sub-regions in Europe did the share of essentially constraint-free conditions reach 20 percent and more.'

Similarly, Davis (2002) finds that Europe is virtually the only part of the world not seriously negatively affected by the ENSO oscillation variations in weather so strongly detrimental to stable agricultural production, especially in Africa and Asia.

through affecting average lifespan (and thus also investment in education), the accumulation through early agricultural productivity of the minimal capital necessary for improvements in infrastructure, education, and health initiatives, the lack of agricultural surpluses for trade, which has knock-on consequences on the development of policy choices and institutional development (such as banks and legal institutions) and so on. In addition to these arguments, recent extensive yet detailed agricultural data may be relevant to state competition and the second factor – a large number of states – necessary for mercantilist policies.

THREE – CENTRALIZATION OF STATES

The last statement above alludes not just to the *number* of states, but to the *strength and centralization* of states. But can this factor also be better considered empirically now than in the past?

The third factor important for a geography of mercantilism is the distribution of strong, centralized, bureaucratically effective states. To some degree the third condition is a result of the first two; there are arguments that trade stimulated the rise of and improved the quality or efficiency of institutions (Knack and Keefer 1995; Acemoglu et. al. 2005; this connection is often thought to occur in close conjunction with urbanization, e.g., Fox 1971, 1989, 1991; Jacobs 1969, 1984). There are also arguments that many, closely interacting states and the resulting interstate competition increased bureaucratic centralization and effectiveness, especially via military competition increasing bureaucratization (e.g., taxes levied to support the military, centralization of powers to enforce taxation, censuses in order to gauge war-making capacity - see especially Tilly 1990, as well as Spruyt 1994 and the long list of examples from de Vries 2002 above). These interrelated aspects of regional state and institutional development then become self-reinforcing in Myrdal-type cumulative causation: States with strong or effective institutions in turn were able to trade more and compete more effectively, further improving their institutions and so on.

It was shown in Figure 4 that there are a number of world regions with extensive areas of productive agriculture, and noted that these areas are associated with early

state development and with varying subsequent degrees of political fragmentation. Were these systems not just of many, but of *strong* competing states? It may be possible to use a measure of the long-term historical strength of states developed to test the relationship between state antiquity and economic growth in Bockstette, Chanda, and Putterman (2002).[14]

Bockstette, Chanda and Putterman (2002) divide the period from 1 to 1950 C.E. into 39 half centuries. They rank each half century based on three questions:

1. Is there a government above the tribal level? (1 point if yes, 0 points if no)

2. Is this government foreign or locally based? (1 point if locally based, 0.5 points if foreign (i.e., the country is a colony), 0.75 if in between (a local government with substantial foreign oversight)

3. How much of the territory of the modern country was ruled by this government? (1 point if over 50%, 0.75 points if between 25% and 50%, 0.5 points if between 10% and 25%, 0.3 points if less than 10%).

COMBINING THE FACTORS - TOTAL PROPENSITY FOR MERCANTILISM BY WORLD REGIONS

As a combined indicator representing both state strength and the potential for state competition (number of states interacting in a region) the 108 measures for historical state strength for Afro-Eurasian countries can be divided into the eight Afro-Eurasian world regions of Lewis and Wigen gives the following, which can be viewed as an objective empirical estimate of state competition potential.

Western Europe	**13.9**
W Asia/N Africa	**9.0**
Sub Saharan Africa	**8.6**
Southeast Asia	**5.4**

[14] 'Answers were extracted from the historical accounts on each of 119 countries in the *Encyclopedia Britannica*. The scores on the three questions were multiplied by one another and by 50, so that for a given fifty year period, what is today a country has a score of 50 if it was an autonomous nation, 0 if it had no government above the tribal level, 25 if the entire territory was ruled by another country, and so on. We then combined the data for the 39 periods, experimenting with different ways of "discounting" to reduce the weight of periods in the more remote past.' (Bockstette *et. al*. 2002, 346).

Eastern Europe	**5.4**
East Asia	**3.9**
Central Asia	**3.8**
South Asia	**3.6**

However, at different time periods there were greater and lesser degrees of interaction between world regions. The major historical divisions Lewis and Wigen make are first between the 'new worlds' and Eurasia, and within the vast Afro-Eurasian area, between Sub-Saharan Africa, East Asia, and the rest of Eurasia. There are then increasingly less important divisions between South Asia, Europe, and East and West Europe. With time the trade and cultural connections between East, Southeast, and South Asia would increase while at the same time the connections between East and West Europe, the Mediterranean and North Africa (at times) would increase. If we take the varying degrees of interaction between regions into account (again using Lewis and Wigen, the major divisions in sociopolitical interaction were between East Asia, South Asia, and west-Asia/Mediterranean) we get something like the following:

Sub-Saharan Africa	**8.6**
East/South/ Southeast Asia	**12.9**
Europe (East and West)	**19.3**
Europe/+Mediterranean	**24.1**

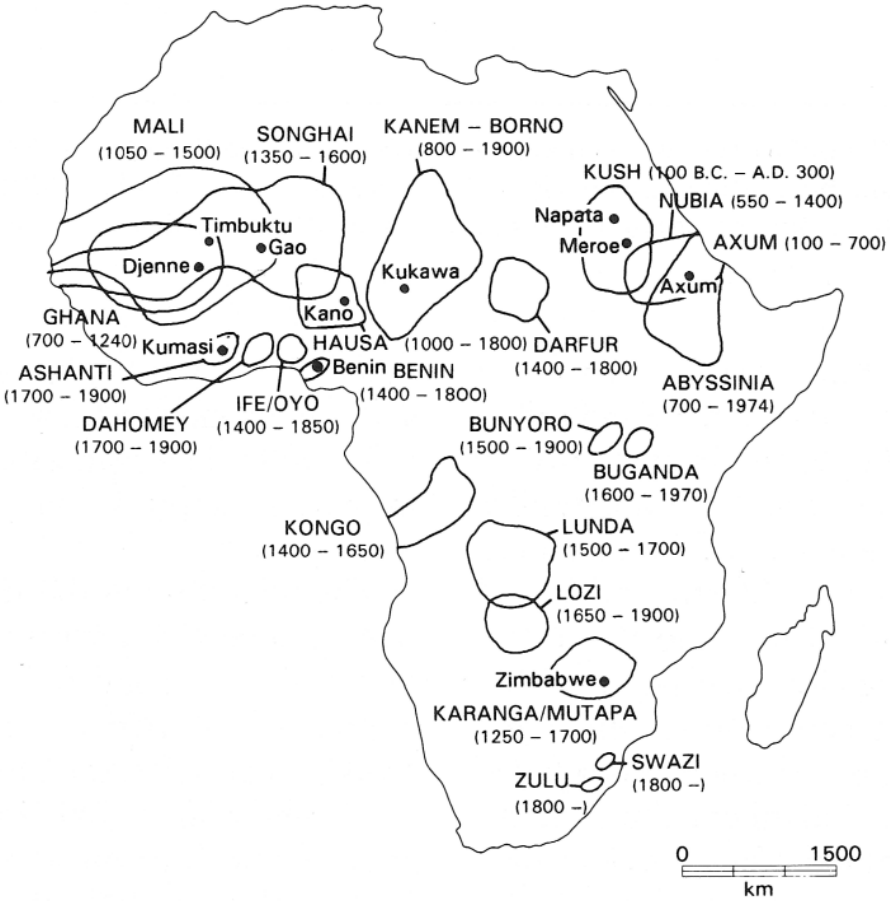
On this measurement, which combines levels of trade and historical interaction between regions, western Eurasia had by far the greatest potential for state competition and competitive policies to develop.[15]

[15] Sub-Saharan Africa may seem to be especially problematic. It has a vast agricultural ecumene comparable to that of western Eurasia (even when taking into account large areas of dominantly forest cover that significantly reduce agricultural land in the Americas and Sub-Saharan Africa). However, here is a good example of where rejections of environmental influence such as those of Blaut (1993), Sluyter (2003) or Robbins (2003) are problematic: They often reject single factors in a piecemeal fashion. Yet in complex systems, of which society is a supreme example, it is widely emphasized and accepted that it is the *interplay* between factors that are often of primary importance. In Africa, the difficulty of the environment is reflected in the unusually low population densities of the continent (which preexist and are largely spatially unrelated to the slave trade – see Bairoch 1993 and Maddison 1995 and 2001; the low population density of Africa is often unnoticed because many map projections obscure the vast size of Africa relative to other world regions, increasing the likelihood of failing to notice how relatively small African populations are given the continent's vast size). Also, as evident in Figure 8.2, the water transport potential in Africa is exceptionally low; *none* of the great African rivers are easily navigable into the interior, many dropping off the great African plateaus, a fact that combines with the low degree of coastal indentation and few natural ports to make water transport very difficult in Africa (Sowell 1996, 1998; Mellinger, Sachs and Gallup 1999). Although this is frequently remarked upon, it is the *interaction* of *multiple* factors such as transport costs, agricultural productivity, demographic factors, the biogeography of disease, and state and institutional development and other factors that is important, a subtle and complex interrelationship that cannot be understood by looking at any one of the relevant factors on their own. [continued next page]

These measures are of course rough estimates. But they do allow for an objective and empirical measure, as opposed to many of the vague statements and assertions one finds in the historical, economic, political and development literature, of the degree of state competition within regions. I plan to further refine and quantify these empirical measurements. Overall, it seems that there was a much greater potential for state competition in the vast western Eurasian agricultural ecumene than in any other region in the world. As has been argued by so many social scientists from different

---

Of particular relevance here, the number of historically strong states in Africa is much smaller than the grid of modern artificially imposed European state structure suggests. Furthermore, given their wide spatial separation (Stock 1995, below) and the underappreciated vastness of the Sub-Saharan region, they likely had significantly less interaction than states in many other Eurasian regions, and the Bockstette et. al. measure likely overestimates the overall level of state strength and interaction in Sub-Saharan Africa.



Major Precolonial African States and Empires

Source: Stock 1995, p. 62

political and disciplinary perspectives, this seems to have been a crucial factor in European development. It was an impetus towards trading post and colonial expansion, increasing the likelihood that it would be a western Eurasian power that would first stumble upon the then unknown extra-Eurasian lands. This, as Blaut 1993, Frank 1998, Pomeranz 2000, Acemoglu et. al. 2003, 2005 and others have argued, had profound knock-on effects on European political, social, demographic, technological, and institutional development with effects that are still felt today, and are especially apparent in global *spatial* patterns of development today.

References

Acemoglu, Daron, Simon Johnson, and James A. Robinson. 2003. Disease and Development in Historical Perspective. *Journal of the European Economic Association* 1(2-3): 397-405.

Acemoglu, Daron; Johnson, Simon; Robinson, James. 2005. The Rise of Europe: Atlantic Trade, Institutional Change, and Economic Growth. *The American Economic Review* 95(3): 546-579. (Previously available as 2002, MIT Department of Economics Working Paper No. 02-43; MIT Sloan Working Paper No. 4269-02).

Alam, M. Shahid. 2000. *Poverty from the Wealth of Nations*. Basingstoke: Palgrave.

Amin, Samir. 1976. *Unequal Development: An Essay on the Social Formations of Peripheral Capitalism.* New York: Monthly Review Press.

Arrighi, Giovanni. 1994 . *The long twentieth century.* London and New York: Routledge.

Baechler, Jean, John A. Hall, and Michael Mann, eds. 1988 . *Europe and the rise of capitalism.* Oxford: Blackwell.

Baechler, Jean. 1995 . *Le capitalisme*. Paris: Gallimard.

Bairoch, Paul. 1993. *Economics and World History: Myths and Paradoxes*. London: Harvester Wheatsheaf.

Ballinger 2008g

Blaut, James M. 1993. *The Colonizer's Model of the World.* New York: Guilford Press.

Blaut, James M. 2000. *Eight Eurocentric Historians*. New York: Guilford Press.

Bockstette, Valerie, Areendam Chanda and Louis Putterman. 2002. States and Markets: The Advantage of an Early Start. *Journal of Economic Growth* 7(4): 347-69.

Braudel, Fernand. 1979. *Civilisation matérielle, économie et capitalisme XVe-XVIIIe siècle*. Paris: Armand Colin.

Coleman D. C. ed., 1969. *Revisions in Mercantilism*. London: Methuen.

Cosandey, David. 1997. *Le secret de l'Occident. Du miracle passé au marasme présent*. Paris: Arléa.

Crone, Patricia. 1989. *Pre-industrial societies*. Oxford: Blackwell.

Crosby, Alfred. 1972. *The Columbian Exchange: Biological and Cultural Consequences of 1492.* Connecticut: Greenwood Press 1972,

Crosby, Alfred. 1986. *Ecological Imperialism: The Biological Expansion of Europe, 900-1900*. Cambridge: Cambridge University Press.

Curtin, Philip D. 1989. *Death by Migration: Europe's Encounter with the Tropical World in the Nineteenth Century*. Cambridge: Cambridge University Press.

Curtin, Philip D. 2000. *The World and the West: The European Challenge and the Overseas Response in the Age of Empire*. Cambridge: Cambridge University Press.

Dahl, Robert and Edward Tufte. 1971. *Size and Democracy*. Palo Alto: Stanford University Press.

Davis, Mike. 2002. *Late Victorian Holocausts: El Niño Famines and the Making of the Third World*. London: Verso.

Doll, Christopher N.H., Jan-Peter Muller and Christopher D. Elvidge. 2000. Night-time imagery as a tool for global mapping of socio-economic parameters and greenhouse gas emissions. *Ambio* 29(3): 159–164.

Forbes D.K. and P. J. Rimmer (eds). 1984. *Uneven Development and the Geographic Transfer of Value.* Canberra: Australia National University Press.

Fox, Edward Whiting. 1971. *History in Geographic Perspective: The Other France.* New York: Norton.

Fox, Edward Whiting. 1989. 'The Argument: Some Reinforcements and Projections', pp. 331-342 in Eugene D. Genovese and Leonard Hochberg, eds. *Geographic Perspectives in History.* London: Blackwell.

Fox, Edward Whiting. 1991. *The Emergence of the Modern European World.* Cambridge, Mass. and Oxford: Blackwell.

Frank, Andre Gunder. 1998. *ReOrient: Global Economy in the Asian Age.* Berkeley: University of California Press.

Fujita, Masahisa and Jacques-François Thisse. 2002. *Economics of Agglomeration: Cities, Industrial Location, and Regional Growth*. Cambridge: Cambridge University Press.

Gallup, J.L., Sachs, J.D., and Mellinger, A.D. 1999. Geography and economic development. *International Regional Science Review* 22: 179-232. (Also published as 1998 *NBER Working Paper No. W6849* and again as Center for International Development (CID) at Harvard University, Working Paper no. 1, March.)

Gellner, Ernest. 1988. *Plough, Sword and Book: The Structure of Human History.* London: Collins Harvill.

Gellner, Ernest. 1997. *Nationalism.* New York: New York University Press.

Giddens, Anthony. 1981. *A Contemporary Critique of Historical Materialism, Vol. I: Power, Property, and the State*. London: Macmillan.

Goldstone, Jack A. 1992. *Revolution and Rebellion in the Early Modern World.* Berkeley: University of California Press.

Goudsblom, Johan. 1996. 'The Formation of Military-Agrarian Regimes', pp. 49-62 in Johan Goudsblom, Eric Jones and Stephen Mennell, *The Course of Human History: Economic Growth, Social Process, and Civilization*. Armonk, NY and London: M.E. Sharpe.

Hall, John A. 1985. *Powers and liberties: The causes and consequences of the rise of the West.* Oxford: Blackwell.

Heckscher, Eli

Hoeschele, Wolfgang. 2002. The Wealth of Nations at the Turn of the Millennium: A Classification System Based on the International Division of Labor. *Economic Geography* 78(2): 221-244.

Huang, Ray. 1999. *Broadening the horizons of Chinese history.* Armonk, New York: M. E. Sharpe.

Jacobs, Jane. 1969 (1970). *The Economy of Cities.* New York: Vintage.

Jacobs, Jane. 1984. *Cities and the Wealth of Nations*. New York: Random House.

Jones, E.L. 1981. *The European Miracle. Environments, Economies, and Geopolitics in the History of Europe and Asia.* Cambridge: Cambridge University Press.

Jones, E.L. 1988. *Growth Recurring: Economic Change in World History.* Oxford: Clarendon Press.

Knack, S. and Keefer, P. 1995. Institutions and economic performance: Cross-country test using alternative measures. *Economics and Politics* 7: 207–227.

Krugman, Paul. 2002. 'Was it all in Ohlin?' 389-406 Bertil Ohlin: A Centennial Celebration, 1899-1999, edited by Ronald Findlay, Lars Jonung, Mats Lundahl. MIT Press.

Krugman, Paul and Anthony J. Venables. 1995. Globalization and the Inequality of Nations. *Quarterly Journal of Economics* 110(4): 857-880.

Kuttner, Robert. 1996. 'Peddling Krugman'. *The American Prospect* 7(28) September 1-October 1.

Landes, David S. 1998. *The Wealth and Poverty of Nations: Why Some Are So Rich and Some So Poor.* New York: Norton.

Lewis, Martin W., and Kären E. Wigen. 1997. *The Myth of Continents, A Critique of Metageography.* Berkeley: University of California Press.

Lovering, John. 1999. Theory Led by Policy: The Inadequacies of the 'New Regionalism' (Illustrated from the Case of Wales). *International Journal of Urban and Regional Research*, 23(2): 379-395.

Maddison, Angus. 1995. *Monitoring the World Economy: 1820-1992*. Paris: OECD.

Maddison, Angus. 2001. *The World Economy: A Millennial Perspective.* Paris: OECD.

Magnusson

Mann, Michael. 1986a. *The sources of social power. Vol. I. A history of power from the beginning to 1760 A.D*. Cambridge: Cambridge University Press.

Mann, Michael. 1986b. The autonomous power of the state; its origins, mechanisms, and results. In *States in history,* ed. John A. Hall, 109-136 . Oxford; New York, Basil Blackwell.

Masters and Sachs 2001

Masters, Bruce. 1988. *The Origins of Western Economic Dominance in the Middle East: Mercantilism and the Islamic Economy in Aleppo, 1600-1750*. New York: New York University Press.

Masters, William A. and Margaret S. McMillan. 2000. 'Climate and Scale in Economic Growth', Center for International Development (CID) at Harvard University Working Paper no. 48, June.

Masters, William and Keith Wiebe. 2000. 'Climate and Agricultural Productivity'. Paper presented at the conference Raising Agricultural Productivity in the Tropics: Biophysical Challenges for Technology and Policy, Center for International Development, Harvard University, October 17.

McCusker, John J. 2000. 'Review of Eli F. Heckscher, *Mercantilism'*. EH.Net Economic History Services, Dec 4 2000. URL: http://eh.net/bookreviews/library/mccusker

McNeill, William H. 1982. *The Pursuit of Power: Technology, Armed Force and Society Since AD 1000.* Oxford: Blackwell.

Mellinger, Andrew D., Jeffrey D. Sachs and John L. Gallup. 1999. Climate, Water Navigability, and Economic Development, Center for International Development CID at Harvard University Working Paper no. 24, September.

Meyerson, Harold. 2011. 'The sad facts behind Rick Perry's Texas miracle', *The Washington Post*. August 17.

Midlarsky Manus I. 1995. Environmental Influences on Democracy: Aridity, Warfare, and a Reversal of the Causal Arrow. *The Journal of Conflict Resolution* 39(2): 224-262.

Mokyr, Joel. 2003. 'Mercantilism, the Enlightenment, and the Industrial Revolution'. Paper presented to the conference in honor of Eli F. Heckscher, Stockholm, May 2003.

NASA . 2001. http://antwrp.gsfc.nasa.gov/apod/image/0011/earthlights_dmsp_big.jpg accessed November, 2007.

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

Powelson, John P. 1994. *Centuries of economic endeavor: Parallel paths in Japan and Europe and their contrast with the third world.* Ann Arbor: The University of Michigan Press.

Rappaport, Jordan and Jeffrey D. Sachs. 2001. 'The U.S. as a Coastal Nation', Federal Reserve Bank of Kansas City and Center for International Development (CID) at Harvard University, Working Paper, July.

Reinert, Eric S. 1994. 'Catching-up from way behind - A Third World perspective on First World history' in Fagerberg, Jan, Bart Verspagen and Nick von Tunzelmann (eds.) *The Dynamics of Technology, Trade, and Growth*, Aldershot: Edward Elgar, pp. 168-197.

Reinert, Eric S. 2004. How Rich Nations got Rich: Essays in the History of Economic Policy. Centre for Development and the Environment, University of Oslo, Working Paper no. 2004/01.

Reinert, Erik S. 1995. Competitiveness and its Predecessors - a 500 year Cross-National Perspective. *Structural Change and Economic Dynamics* 6: 23-42.

Reinert, Erik S. 1996. 'The Role of Technology in the Creation of Rich Nations and Poor Nations: Underdevelopment in a Schumpeterian System', in *Rich Nations-Poor Nations, The Long Run Perspective.* Aldershot: Edward Elgar, pp. 161-188.

Reinert, Erik S. 1998. 'Raw Materials in the History of Economic Policy: Or Why List (the Protectionist) and Cobden (the Free Trader) Both Agreed on Free Trade in Corn', pp. 275-300 in Gary Cook, ed. *The Economics and Politics of Free Trade; Freedom and Trade: Volume II.* London: Routledge, pp. 275-300.

Rich, Paul. 2006. 'Mercantilism and the Future: The Future Lives of an Old Philosophy' pp. 183-194 in *Handbook of Organization Theory and Management: The Philosophical Approach*, Thomas Dexter Lynch and Peter L. Cruise. Boca Raton, Fl.: CRC Press (Taylor and Francis).

Robbins, Paul. 2003. Networks and Knowledge Systems: An Alternative to "Race or Place". *Antipode* 35(4): 818-822.

Romer, Paul M. 1986. Increasing Returns and Long-Run Growth. *The Journal of Political Economy* 94(5):1002-1037

Rosenberg, Nathan, and Luther E. Birdzell. 1986. *How the West grew rich: the economic transformation of the industrial world*. New York: Basic Books.

Sachs, Jeffrey D. 1997. 'Geography and Economic Transition', Center for International Development (CID) at Harvard University Working Paper, November.

Sanderson, Stephen K. 1995. *Social transformations: A general theory of historical development.* Oxford: Blackwell.

Sluyter, Andrew. 2003. Neo-environmental determinism, intellectual damage control, and nature/society science. *Antipode* 35(4): 813-817.

Sowell, Thomas. 1996. *Migrations and Cultures: A World View.* New York: Basic Books.

Sowell, Thomas. 1998. *Conquests and Cultures: An International History*. New York: Basic Books.

Spruyt, Hendrik. 1994. *The sovereign state and its competitors.* Princeton: Princeton University Press.

Stock, Robert. 1995. *Africa South of the Sahara: A Geographical Interpretation.* New York: Guilford.

Sutton, Paul C. and Robert Costanza. 2002. Global estimates of market and non-market values derived from nighttime satellite imagery, land cover, and ecosystem service valuation. *Ecological Economics* 41: 509–527.

Taagepera, Rein. 1978. Size and duration of empires: Systematics of size. *Social Science Research* 7: 108-127.

Tilly Charles. 1990. *Coercion, capital, and European states, AD 990-1992.* Oxford: Blackwell.

Ekelund, Robert and Robert Tollison. 1982. *Mercantilism as a Rent Seeking Society*. College Station: Texas A&M University Press.

Vries, P. H. H. 2002. Governing Growth: A Comparative Analysis of the Role of the State in the Rise of the West. *Journal of World History* 13(1): 67-138.

Wallerstein, Immanuel. 1974. *The Modern World-System, vol. I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century*. New York/London: Academic Press.

Wallerstein, Immanuel. 1980. *The Modern World-System, vol. II: Mercantilism and the Consolidation of the European World-Economy, 1600-1750*. New York: Academic Press.

Wallerstein, Immanuel. 1989. *The Modern World-System, vol. III: The Second Great Expansion of the Capitalist World-Economy, 1730-1840's*. San Diego: Academic Press.

Weiss, Linda, and John M. Hobson. 1995. *States and economic development.* Cambridge: Polity.

Williamson, Jeffrey G. 2002. 'Winners and Losers over Two Centuries of Globalization'. Paper prepared for the 2002 WIDER Annual Lecture, Copenhagen, September 5.

Wright, Robert. 2000. *Nonzero: The logic of human destiny*. New York: Pantheon.