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## Cliodynamics

### Title

Great Divergence of the 18th Century?

### Permalink

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### Journal

Cliodynamics, 9(2)

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### Publication Date

2018

### DOI

10.21237/C7clio8233403

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## **Great Divergence of the 18<sup>th</sup> Century?**

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### **Abstract**

The article suggests that the Great Divergence of the 19<sup>th</sup> century between “the West” and “the East” was preceded by the Great Divergence in the 18<sup>th</sup> century between the Global North and the Global South. This may be attributed to a new, much higher level of state efficiency in the Global North. The eastern and western regions of the Global North frequently used different methods to make their state apparatuses more efficient, but achieved strikingly similar results during the 18<sup>th</sup> century. The Great Divergence of the 19<sup>th</sup> century, remarkably, occurred within the Global North.

### **Introduction. The Great Divergence**

One of the major contributions made by Jack Goldstone to the study of social macroevolution is constituted by his founding of the 'California School' in whose framework the Great Divergence theory was developed (Frank 1998; Goldstone 1991, 2002, 2008a, and 2008b; Marks 2002; Pomeranz 2000 and 2002; Vries 2003, 2010, and 2013; Wong 1997).

In the 19<sup>th</sup> century, northwestern Europe saw the birth of capital-intensive and fossil-fuel based manufacturing. Spreading throughout Europe and the United States, these changes triggered explosive growth resulting in the gap in per capita incomes between the First and Third World that has become known in the California School framework as the Great Divergence. In the 20<sup>th</sup> century the Great Divergence continued until the 1970s; later on, after a period of uncertain fluctuations, it was replaced by the Great Convergence, when many countries of the Third World achieved much higher growth rates than the majority of the First World countries (see, e.g., Derviş 2012; Goldstone 2016; Grinin and Korotayev 2015; Korotayev and de Munck, 2013; Korotayev, de Munck, 2014; Korotayev, Goldstone, and Zinkina 2014; Korotayev, Zinkina, et al. 2011a; Korotayev, Zinkina, et al. 2011b; Korotayev, Zinkina, et al. 2012; Sala-i-Martin 2006; Spence 2011; Zinkina, Malkov, and Korotayev 2014).

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*Citation:* Korotayev, Andrey, Julia Zinkina, and Denis Zlodeev. 2018. Great Divergence of the 18<sup>th</sup> Century? *Cliodynamics* 9: 108–123.

The phenomenon of the Great Divergence is fundamentally important in the context of global history, because it largely pre-defined the subsequent division of the world into developed countries and developing countries, as well as the structure of relations in the global world in the 19<sup>th</sup> and the 20<sup>th</sup> centuries.

In this article, we suggest that the Great Divergence of the 19<sup>th</sup> century between “the West” and “the East” was preceded by the Great Divergence in the 18<sup>th</sup> century between the Global North and the Global South. This may be attributed to a new, much higher level of state efficiency in the Global North. The eastern and western regions of the Global North frequently used different methods to make their state apparatuses more efficient, but achieved strikingly similar results during the 18<sup>th</sup> century. The Great Divergence of the 19<sup>th</sup> century, remarkably, occurred within the Global North.

## **The Timing of the Great Divergence**

While abundant literature on this phenomenon exists, the question of the timing of the start of the Great Divergence still remains open. Undoubtedly, it fully revealed itself during the 19<sup>th</sup> century. However, no unanimous opinion exists regarding the appearance of pre-requisites to the Great Divergence, particular success or failure stories of various countries—even though they eventually led to the formation of a new center of the World System, first in North-Western Europe and later in the Anglo-Saxon colonies. Two major viewpoints are present in the literature:

- 1) an idea of a dichotomy between dynamic Europe and the 'stagnant' East, thanks to which the European countries outpaced their rivals long before 1800;
- 2) an idea that in 1800 the world was relatively “flat”, and the West was hardly discernible from the East according to a whole range of major economic indicators.

Most commonly, these ideas imply a Great Divergence between the West and the East. However, a closer look at the arguments provided for the second viewpoint (e.g., Goldstone 2000, 2002, and 2008; Pomeranz 2000; Vries 2003) easily reveals that almost all examples pertain to East Asia. On the contrary, it is rather obvious that the rest of the East (including North Africa, as well as West, South, Central, and Southeast Asia) lagged behind quite remarkably by the beginning of the 19<sup>th</sup> century. Moreover, the major part of South Asia found itself under British power, while the most populous region of Southeast Asia was under the power of the Dutch. Notably, most examples of North Africa, West Asia, and

South Asia being at a level of development comparable to that of the West belong to the period before the 17<sup>th</sup> century.

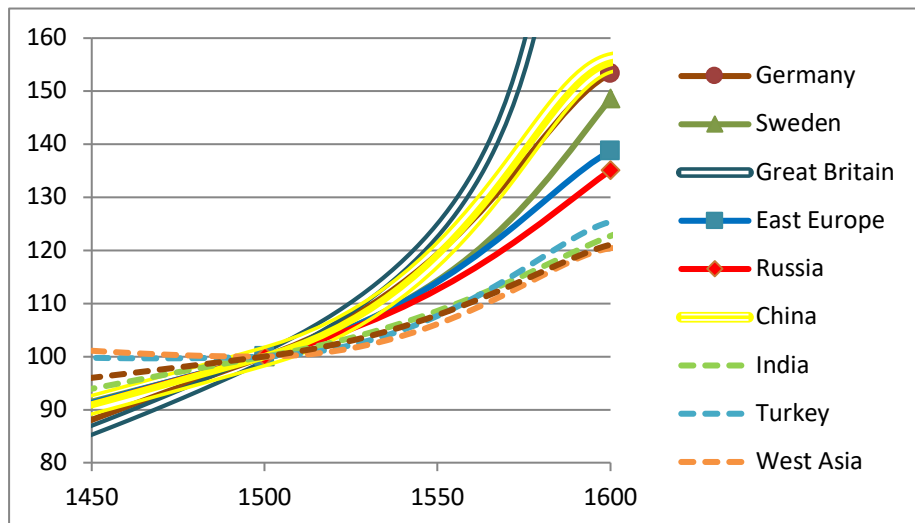
Let us emphasize that in the early modern period it was only East Asia that continued being the West's 'rival' in such spheres as literacy, book printing, and scientific discoveries. North Africa, as well as West, Central, and South Asia were already well off pace in these respects.<sup>1</sup> As regards sub-Saharan Africa and Southeast Asia, these regions never claimed leadership in the World System (see, e.g., Baten and van Zanden 2008; Buringh and van Zanden 2009; Febvre and Martin 1976).

The 16<sup>th</sup> century was rather successful for almost all great civilizations of the Old World (Braudel 1982; Perrie 2006; Grinin 2017; Raychaudhuri, Habib, and Kumar 1982; Twitchett and Fairbank 1998; note as well Figure 1<sup>2</sup>).

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<sup>1</sup> Note, however, that there were some techno-scientific innovations, philosophical progress, and certain developments in agriculture, manufacture, and hygiene where India did not lag behind Western Europe until the 19<sup>th</sup> century. See especially Parthasarathi 2011; Yazdani 2017. For India, see also the writings of David Washbrook (1988, 1990, 2004, 2007, and 2009), Tirthankar Roy (2002 and 2011) and Roman Studer (2008). On West Asia and North Africa see in particular Floor 1998; Hanna 1995, 2002, 2007, and 2011; Keddie & Matthee 2002; Kuran 2012; Pamuk 2014.

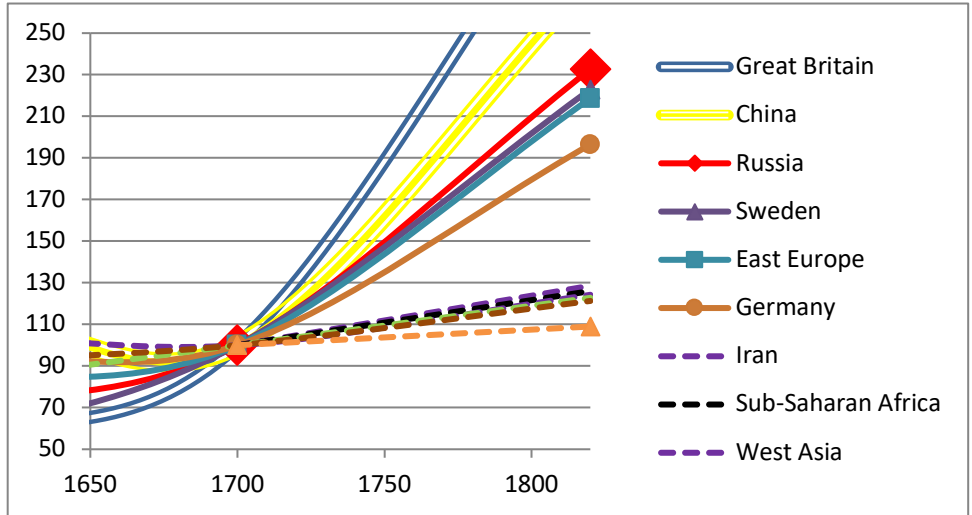
<sup>2</sup> Note that the group of underachievers in the 18<sup>th</sup> century already show slower growth in the 16<sup>th</sup> century, which could also point to earlier roots of divergence (see, e.g., Broadberry 2013; Broadberry, Custodis, and Gupta 2015; Broadberry and Gupta 2006; De Pleijt, Van Zanden 2016; Grinin and Korotayev 2015; Van Zanden 2009).



**Figure 1.** GDP growth dynamics in relative terms in various countries and regions of the Old World. 16<sup>th</sup> century 100 = GDP in 1500. Source: Maddison 2010.

Of course, Maddison’s estimates are rather rough, but we believe that they provide a qualitatively correct picture of the relative performance of the main countries and regions of the world in the early modern period.

The 17<sup>th</sup> century was an epoch of global crisis, when all the great civilizations of the Old World experienced remarkable turbulence and encountered harsh difficulties (Parker 2013; Shevskiy 2017: 95). The 18<sup>th</sup> century witnessed restoration and growth—but this growth was highly uneven, as we will show below. While in some countries the economy grew by 100-200% from 1700 to 1800, other economies only increased by 10-20% during the same period (Figure 2).



**Figure 2.** GDP growth dynamics in relative terms in various countries and regions of the Old World. 18th century 100 = GDP in 1700.

The first group, the 'achievers', includes a number of European countries, Russia, and East Asian countries (China, Korea, and Japan), while the second group of 'low-performers' includes almost all the rest of countries and regions of the Old World.<sup>3</sup>

<sup>3</sup> Note that the 18<sup>th</sup> century 'achievers' were successful mostly in accomplishing high rates of GDP growth, rather than GDP per capita growth as was the case with the 19<sup>th</sup> century achievers. The 18<sup>th</sup> century societies (even the ones belonging to the group of achievers) mostly remained in the Malthusian trap (the systematic escape from which only began in the World System core in the 19<sup>th</sup> century). Before the 19<sup>th</sup> century, economic growth was realized more through GDP growth rather than through the growth of GDP per capita. Modern economists tend to neglect the importance of traditional economic growth, as in the pre-19<sup>th</sup> century world dramatic increases in GDP tended not to be accompanied by comparable increases in GDP per capita (frequently the latter did not increase at all or even decreased). As is asserted by Clark (2007: 1), "before 1800 income per person – the food, clothing, heat, light, and housing available per head – varied across societies and epochs. But there was no upward trend. ... [T]he average person in the world of 1800 was no better off than the average person of 100,000 BC. Indeed in 1800 the bulk of the world's population was poorer than their remote ancestors". Note, however, that this was accompanied by orders of magnitude growth in global GDP that resulted in orders of magnitude growth in global cultural complexity (manifested in the formation of global city system, global systems of trade routes, complex political systems, and sophisticated systems of information production, distribution, and storage) (see, e.g., Ekstig 2017; Grinin, Korotayev 2009 and

It is easy to note that the first group encompasses the northern part of the Old World, while the second group occupies its southern part. Thus, the Great Divergence between the West and East Asia, which occurred in the 19<sup>th</sup> century, was preceded by the Great Divergence between the Global North and the Global South in the 18<sup>th</sup> century. The Great Divergence of the 19<sup>th</sup> century thus took place within the Global North. Below we present some preliminary ideas on the possible factors of the Great Divergence of the 18<sup>th</sup> century.

First and foremost, almost all of the states of the Global North managed to secure rather high levels of safety and decades of stable development despite the remarkable increase in population and levels of sociocultural complexity. At the same time, the major states of the Global South failed to complete this task (even though their growth in population and the level of sociocultural complexity was much less remarkable).

The countries of the Global North turned out to be more successful in solving this task largely due to increased effectiveness of their state structures in the 18<sup>th</sup> century. Notably, though in the western and the eastern countries of the Global North the increase in the state effectiveness was achieved through fundamentally different methods, the results turned out to be quite similar. The western mode of statehood development was related to the emergence of the modern mature bureaucratic state (Barker 1944; Jacoby 1973; Kamenka 1989; Krygier 1979; Silberman 1993). The eastern mode of achieving state effectiveness is much less studied, but undoubtedly brought remarkable results as well. Let us mention the following example:

In the autumn and winter of 1743–1744, a major drought afflicted an extensive portion of the North China core, resulting in a virtually complete crop failure. The famine-relief effort mounted by the court and carried out by ranked bureaucrats was... stunningly effective. Ever-normal and community granaries were generally found to be well stocked, and the huge resources of grain in Tongzhou and other depots were transported in time to key points throughout the

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2013; Korotayev, Malkov, and Khalitourina 2006; Smith et al. 2016). Of course, one may doubt any estimates of global GDP around 100,000 BCE, but it is quite clear that, for example, the amount of food (measured, e.g., in kilocalories) produced by humans increased between 100,000 BCE and 1800 CE by a few orders of magnitude, whereas the amount of energy produced by humans (including wind and water, animal, and various fuel energies) increased even more dramatically. It was this huge economic expansion (even if it was not accompanied by a comparable expansion of per capita production) that supported the abovementioned dramatic increase in human sociocultural complexity, and that is why this economic expansion must not be neglected.

stricken area. Networks of centers were quickly set up to distribute grain and cash, and soup kitchens were organized in every city to which refugees fled. In the following spring, seed grain and even oxen were distributed to afflicted farming households. As a result of this remarkable organizational and logistic feat, starvation was largely averted, and what might have been a major economic dislocation had negligible effect on the region's economic growth. (Skinner 1985: 283).

It is extremely hard to find comparable examples of such effective functioning of state apparatus in Europe in the 18<sup>th</sup> (and even in the 19<sup>th</sup> century). So, in the 18<sup>th</sup> century European state efficiency somewhat lagged behind the East Asian in certain aspects (however, in the long-term perspective, the western way of establishing regular bureaucratic states proved much more promising) (see, e.g., Vries 2003 and 2013).

For example, let us note a remarkable distinction in statehood development between Great Britain and China—the European and the East Asian leaders respectively in the 18<sup>th</sup> century. In the 18<sup>th</sup> century Britain (as well as in other European countries in that epoch), statehood development largely went with an increasing proportion of GDP being concentrated in the hands of the state. This allowed for the creation of increasingly complex and effective state structures (Brewer 1989; Daunton 2012; Dincecco 2009 and 2011; Dincecco and Prado 2009; Dincecco and Katz 2016; Schulze 1995; t'Hart 1995; Yun-Casalilla 2012). As regards 18<sup>th</sup> century China, here the 'minimal state' dream of European liberals came very close to reality. Contrary to the European experience at that time, Chinese taxes were set at almost a record low level, which served as an important factor in the impressive economic growth achieved by China in the 18<sup>th</sup> century (see, e.g., Goldstone 2003; Peterson 2002). However, we would emphasize once more that in the long-term perspective the British way of establishing a regular bureaucratic state proved much more effective (Dincecco 2009 and 2011; Dincecco and Prado 2009; Dincecco and Katz 2016; Vries 2003 and 2013).

Let us bring in one more point with regard to the higher growth rates of the Global North countries—the pathogen factor. During the Global Crisis of the 17<sup>th</sup> century, both the Global South and the Global North suffered from catastrophic pandemics (Parker 2013). However, the European countries (including Russia) responded to the pandemic challenge through the introduction and diffusion of the quarantine system. During the 18<sup>th</sup> century, this system largely secured Europe and Russia against new epidemic waves (Parker 2013). This successful response was to a large extent due to the point we discussed above—namely, the development

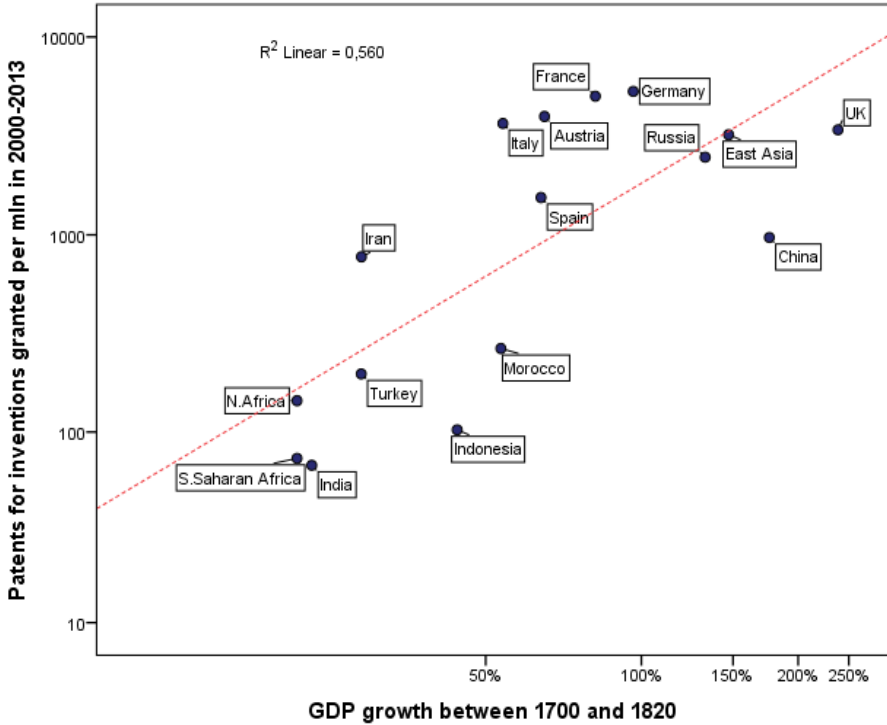


of an effective bureaucratic apparatus, which was capable of organizing truly effective quarantines.

East Asia followed its own way, which also secured effective protection from pandemics in the 18<sup>th</sup> century. It was essentially based on the politics of seclusion, which was implemented in Japan, Korea, and China. The governments of these states strictly limited and controlled all contacts between their countries and the outer world. Thus, for example, foreign trade with Europeans was allowed through only one port (Nagasaki in Japan, Canton in China) (Hellyer 1977; Van Dyke 2005). The Chinese government exerted strict control over land passageways as well.

East Asian 'seclusion' had, of course, a number of negative consequences, hindering the spread of certain important innovations from Europe. However, it also hindered the distribution of some negative phenomena, such as the opium trade (in order to start this trade in the 1840s, the British had to forcefully 'open' China) and waves of epidemics. Indeed, in the 18<sup>th</sup> and the early 19<sup>th</sup> centuries, global epidemic waves persisted in inflicting demographic catastrophes on the countries of the Global South, being a strong obstacle to their economic development (Korotayev and Khaltourina 2006), but largely failed to penetrate the East Asian countries due to their seclusion. Moreover, we should note a remarkable high level of sanitary culture in East Asia, which also contributed to the decline of epidemics. Thus, in China already in the 18<sup>th</sup> century even commoners did not drink un-boiled water, city waste (including human feces) was immediately removed and used as fertilizers, and so on (Lee and Wang 1999).

Remarkably, the division of the world into the Global North (including Russia and China) and the Global South taking place in the 18<sup>th</sup> century reveals itself in our current time as well, if we take into account such an important indicators of technological innovative activity as the number of patent grants per millions of people (see, e.g., Korotayev, Zinkina, and Bogevolnov 2011; Lunev and Voskressenski 2016; Sergeev and Artyushkin 2016). Indeed, it is the Global North that experiences vibrant technological development and patents the majority of global inventions—dramatically more than in the Global South. This pattern becomes visible through a somewhat unexpected correlation between the current number of invention patents per 1 million people and economic growth rates in the 18<sup>th</sup> century (Figure 3).



**Figure 3.** Correlation between the GDP growth rates in 1700–1820 and the number of invention patents granted in 2000–2013 in various countries and regions of the Old World, double logarithmic scale. Source: Maddison 2010; WIPO 2016.

A few words should be said about the Great Divergence of the 18<sup>th</sup> century in the New World as well. The New World entered the 18<sup>th</sup> century with ample resource abundance, while most civilizations of the Old World reached the carrying capacity ceiling at the then level of technological development. The aboriginal population of the New World experienced catastrophic depopulation in the 16<sup>th</sup> and the 17<sup>th</sup> centuries, while the number of European settlers was still very small in relation to the vast resources of the two continents. According to Maddison, in 1700 the population only reached 1200 thousand people in North America and about 12 million in Latin America. The population of Europe, for the sake of comparison, reached 81.5 million, while Asia had more than 400 million people in 1700 (Maddison 2010). Thus, a colossal growth potential existed in the New World by

the early 18<sup>th</sup> century. The relative political stability, which prevailed there during the major part of that century, allowed for the realization of this potential to a remarkable extent.

GDP growth was very considerable in Latin America in 1700–1820, reaching 135%—a result quite comparable with that of the Global North in the eastern hemisphere. However, this result is dwarfed by the GDP growth achieved in North America during the same period—by more than 2000%! The sharp contrast between North and Latin America was observed in the 18<sup>th</sup> century in terms of GDP per capita growth as well—152% vs. 31%, respectively (Maddison, 2010). Thus, the divergence between the Global North and the Global South expressed itself in the New World as well, which means that we are dealing here with a truly global process encompassing the whole world.

### Acknowledgment

This research has been supported by the Russian Foundation for Basic Research (Project No. 17-06-00464).

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