

Grace Flandreau

ECON 485

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Escaping the Malthusian Model: England vs China

The emergence of modern growth and the breakout of the Malthusian model between 1600 and the mid 19th century marks a turning point in how economies function around the world. The rise of commercialization and trade introduced new goods and increased food security through more productive farming. A variety of reasons such as societal customs and government power impact how quickly a society or country is able to break out of the Malthusian model and create a stronger economy. In the cases of England and China, England was able to economically advance faster due to societal factors of hard work and individualism. China was slower to advance due to its collectivist culture and the stronghold of their government. This paper will demonstrate how these differences impacted these countries' breakouts from the Malthusian model.

In order to understand what made these countries' economic advancements different, it is important to dissect the reasons for breakout from the Malthusian model. The Malthusian model is dependent on the idea that as population increases, income decreases, and vice versa. During the Black Death in Europe, population dramatically decreased, which caused income to rise according to the model. The Malthusian model would predict that after the population started to increase again around 1450, the median income would go back to equilibrium, but this did not happen in the case of England. It has been theorized that English workers became accustomed to

high wages, leading them to "work harder." In contrast, China did not experience this demographic shift or the subsequent increase in individualism.

An important difference between China and England during this period was their societal expectations of individualism. The rise of Protestantism in Europe during the 16th and 17th centuries highlighted the growing emphasis on individualism. Due to Martin Luther encouraging people to read the Bible on their own, Becker and Woessmann argued that there was a link between Protestantism and literacy, through the lens of 19th century Prussia. Table 4 of B&W demonstrates that there was a link found between the two variables. While there is statistical significance of correlation at the 1% level, it is important to recognize that there is no evidence of causation, which can be affected by other variables (Becker Table 4). The intellectual development of literacy among the English and other Europeans would allow them to develop into more artisan and technological fields of work. This combined with the agricultural revolution allowed for more variety in professions during this time. China's culture focused on the collective under the emperor. The Civil Service exam offered limited financial mobility, leading families to spend generations trying to advance male relatives through to the top tier. However, once a man passed the top exam, the rule of avoidance made it so they were not allowed to work in their home province and could only work for three years at a time in other provinces. This was due to the emperor's desire to maintain stability across the country, which would eventually further decrease the possibility of individualism in China.

Mokyr develops how England was able to advance during the Industrial Revolution through his theory of the importance between science and technology (Mokyr). The combination of these studies allowed the revolution to expand by the inventions of new technologies to increase productivity in different fields. For example, the steam engine combined tinkering with

the science of steam in order to improve transportation. These fields also enabled social mobility for the less formally educated. Encouragement of creating new inventions also led to higher levels of productivity for different artisan fields, such as watch making. In China, since it was still a very agricultural society by this time, there was less importance placed on the creation of new technologies. The Civil Service exam did not test on science, but instead history going back five hundred years. The importance of this exam made it nearly impossible to become successful unless a person was literate and educated enough to pass each level. Representatives in power prioritized appeasing the emperor to secure favorable future appointments over enhancing provincial productivity. This focus on maintaining the system over innovation stunted China's economic growth.

The different styles of government played a significant role in the developments of both of these countries. As mentioned, China had a strict government that restricted individualism. According to AJR, countries are more likely to be economically successful if there is less power given to the government (Acemoglu). This can be seen with England due to the Magna Carta, which restricted the power of the King. The lack of power of the government allowed for individuals to make decisions on becoming economically successful during their lifetimes. This also allowed freedom for English merchants to find success in whatever endeavors they chose, which would increase the overall success of the country. Under China's centralized rule, individuals had fewer avenues for financial advancement. According to Brandt, Ma and Rawski, another reason for the lack of economic growth in China was due to the legal system of the country (Brandt). Due to a lack of formal and independent lawyers, the outcomes of legal cases were highly dependent on personal connections between families and the representatives. Social hierarchy's legal significance helped perpetuate the importance of social status in China. Lack of

security for people in China made them more nervous that their livelihoods could be taken away by the government. The ability to escape from the government, with their possessions, leads to an important difference between these societies. Since Europe had many countries, it was possible for those who got in trouble with the law to flee to a new country to escape legal consequences. Given China's vast size, comparable to Europe, and its unified governance, implementing these rules was a considerable challenge, which may have fostered a more cautious approach among the Chinese regarding governmental regulations.

The sizes of England and China affected how economic growth occurred. As mentioned, China was about the size of Europe, while England could fit into one of China's many provinces. An issue that came about from this size difference was the ability for convergence of prices. Since England is a much smaller country, it was easier for prices to converge. In contrast, China's scale delayed convergence. This can be seen in Figure 2 of Bernhofn. The figure demonstrates how in 1800, it would take England around two months to reach the half life of its convergence, but it was taking North China around fifty months to do the same (Bernhofn Figure 2). Besides just the size differences between the two countries, there are cultural reasons for this as well. In China, the push for stability from the emperor led to less contact between the provinces. The emperor limited interprovincial contact to prevent uprisings. The separation of provinces would mean that they were not trading with each other, slowing down convergence times. England was doing the opposite by having different areas of the country specialize in different trades that they were the best at. This helped the country to advance at a faster rate since the country was working together to achieve economic growth.

The differences in economic growth between China and England were due to various factors. These reasons span from cultural differences, such as the level of individualism in the

countries, to the power of the government. These trajectories reflect deep cultural and institutional contrasts. England's path to economic growth was driven by individualism, literacy, and lack of government restrictions, which allowed for entrepreneurial freedom. In contrast, China's collectivist culture and centralized government inhibited individual initiative.

Understanding historical economics necessitates examining the intricacies of economic growth and the departure from the Malthusian model. Even with the technological advancements of the past three decades, many societal factors prevalent in those earlier eras persist in today's countries. Although less prominent now, these factors are crucial for comprehending economic theory.

Supporting Tables

Becker, Table 4

Table 4: PROTESTANTISM, LITERACY, AND ECONOMIC OUTCOMES IN 19TH CENTURY PRUSSIA

Dependent variable:	Share Manuf & Serv (1)	Share Manuf (2)	Share Services (3)	ln(Income) ^a (4)	Share Manuf & Serv (5)	Share Manuf (6)	Share Services (7)	ln(Income) ^a (8)
% Literate	.465 (.060)***	.357 (.055)***	.107 (.016)***	.638 (.078)***	.490 (.066)***	.390 (.061)***	.100 (.017)***	.636 (.086)***
% Protestants					-.013 (.015)	-.018 (.014)	.004 (.004)	.001 (.020)
% Missing education info	.164 (.443)	.224 (.409)	-.060 (.116)	-.179 (.576)	.196 (.445)	.266 (.410)	-.070 (.117)	-.182 (.579)
% Age below 10	.456 (.248)*	.664 (.229)***	-.208 (.065)***	-.569 (.322)*	.507 (.254)**	.730 (.235)***	-.223 (.067)***	-.573 (.331)*
% Jews	.503 (.396)	-.298 (.366)	.801 (.104)***	1.914 (.516)***	.463 (.399)	-.351 (.368)	.814 (.105)***	1.917 (.520)***
% Females	-2.240 (.424)***	-1.893 (.392)***	-.347 (.112)***	-3.477 (.552)***	-2.234 (.425)***	-1.884 (.392)***	-.349 (.112)***	-3.477 (.553)***
% Born in municipality	.151 (.047)***	.201 (.043)***	-.050 (.012)***	-.045 (.061)	.124 (.056)**	.166 (.052)***	-.042 (.015)***	-.043 (.073)
% Of Prussian origin	-.207 (.252)	.051 (.233)	-.258 (.066)***	.090 (.328)	-.217 (.252)	.038 (.233)	-.255 (.066)***	.091 (.329)
Average household size	-9.677 (1.739)***	-8.062 (1.605)***	-1.614 (.457)***	-5.759 (2.263)**	-9.063 (1.769)***	-8.435 (1.632)***	-1.528 (.465)***	-5.738 (2.305)**
ln(Population size)	5.760 (1.212)***	3.700 (1.119)***	2.060 (.319)***	6.677 (1.577)***	5.806 (1.213)***	3.760 (1.119)***	2.046 (.319)***	6.674 (1.580)***
Popul. growth 1867-1871 (in %)	1.582 (.125)***	1.481 (.115)***	.102 (.033)***	.884 (.163)***	1.550 (.130)***	1.439 (.120)***	.111 (.034)***	.887 (.170)***
Obs.	452	452	452	452	452	452	452	452
R ²	.654	.615	.554	.586	.654	.617	.555	.586

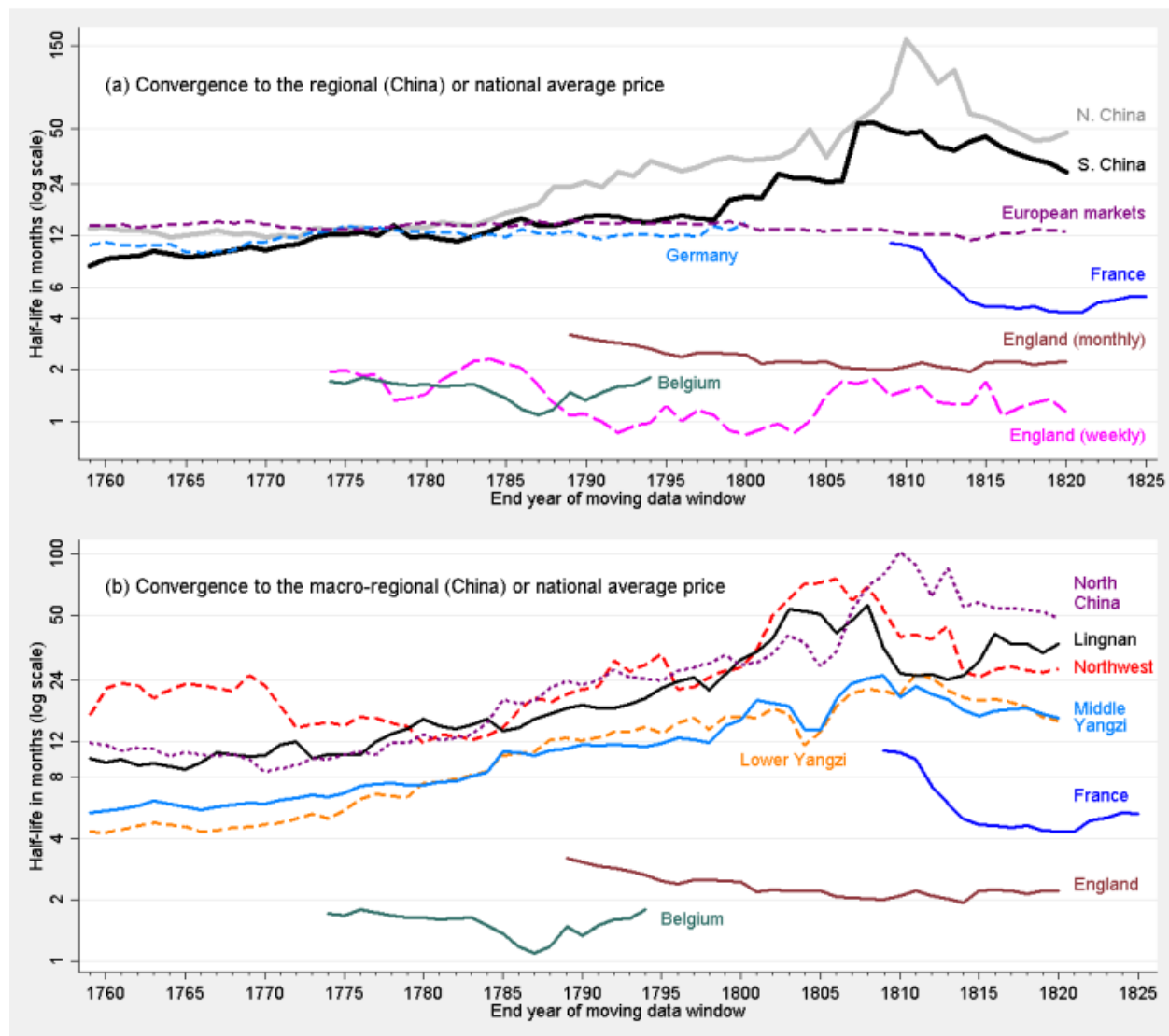
Standard errors in parentheses: * significance at ten, ** five, *** one percent. Sectoral shares refer to total labor force.

Source: Data for Prussian counties from the 1871 Population Census, 1882 Occupation Census, and 1886 Education Census; see main text and appendix for details.

^a Coefficients multiplied by 100.

Further controls: % Blind, % Deaf-mute, % Insane.

Bernhofen, Figure 2



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