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Introduction to the Special Issue: A New Economic History of China

Kris Mitchener and Debin Ma

1. Introduction

Two decades ago, when the debate over when and why China fell behind the West began to simmer, the landscape of who worked on Chinese economic history and how they did it differs considerably from today. Scholars debating the “Great Divergence” noted the dearth of economic statistics on China comparable in quality and quantity to those of Western Europe and other advanced economies in the world and research employing quantitative analysis and economic theory to understand such questions was largely conducted by scholars located outside the country despite the country’s rich historiographic tradition and nearly two thousand years of written records.

Since that time, something akin to a “Cliometric Revolution” is steadily taking hold in Chinese history, driven by institutional, political, and economic changes that have swept China more broadly. The upgrading of universities, research institutions, libraries and archives has created an improved infrastructure for conducting quantitative economic history in China. And China’s integration into the global economy has simultaneously facilitated an increased flow of ideas and scholarly exchange across its borders. A significant shift in the scholarly landscape has been the gradual rebalancing of the community working on Chinese economic history, both in terms of training and methodological emphasis. The last decade has seen the growth of a new generation of researchers who returned to China from having gained training in the quantitative and economic approaches from North American, European and Japanese Ph.D. programs, complementing the existing (and growing) stock of scholars located in and outside of China. In conjunction with the rising stock of foreign-trained Ph.D.’s in economic history, Chinese universities, such as Hong Kong University of Science and Technology, Tsinghua University, Nankai University in Tianjin, Shanghai University of Finance and Economics now produce a steady stream of doctoral students trained in quantitative economic history, many of whom are making academic careers in China. To a certain degree, the rise of quantitative economic history in China is also partly the result of a

gradual and decisive shift toward the contemporary Western market-oriented economics paradigm and away from the once dominant Marxist framework.

Further, and in contrast to two decades ago, events encouraging the free flow of research both within China and with the rest of the world (economic history workshops, conferences, seminars, and visiting scholar programs) now occur regularly within these and other universities. Encapsulating these trends was the attendance of more than 100 Chinese participants at the 17th Economic History World Congress held in Kyoto, Japan; previously congresses saw only a handful of China-based researchers. Scholarship in Chinese economic history now makes regular appearances in economics journals in both the United States and China. As a result of these changes, recent events suggest that economic history research within China and outside of its borders are beginning to work in greater concert.¹

The new economic history of China started off as a collaborative effort between historians and economists in the discovery and compilation of new archival data or the re-organization of existing well-known archival data, particularly large scale data sets aided by the digital revolution. A broader application of economic theory and statistical methods to the economic history of China have allowed scholars to tap into historical data that was previously viewed as unfit for quantitative work (such as qualitative information), enabling a new generation of economic historians to reinvestigate and more rigorously examine some classic historical questions in Chinese history as well as test new hypotheses, many of which are shaped by broader questions in the social sciences.

It should also be noted that this movement in Chinese economic history reflects a broader diffusion of “new economic history” to the developing world in the recent decades.² That said, the Cliometric Revolution took off in China within a peculiar historical context. Starting in the early 20th century, linguistic reforms introduced “modernized” characters and a numerical system for writing that was markedly different from the traditional texts where most historical materials were transcribed. Further, the radicalization of revolutionary

¹ These include conferences, such as the October 2015 All-UC Conference in Chinese Economic History in Berkeley, California (of which several of these papers were first presented) and the annual quantitative history conference hosted by Tsinghua and Beijing Universities as well as scholarly societies, such as the Asian Historical Economic Society, which has brought together scholars working on China and other parts of Asia from around the world.

² See for example, the interesting article by Chaudhary et. al (2012) for the case of Clio in the “BRIC” countries. For the rise of new Asian and Indian economic history respectively, see Explorations in Economic History’s 2010 special issue on Asian Economic History.

ideology during the 1960s and 1970s led to large-scale destruction and dispersal of historical archives and other materials. All these are bound to have an influence on the accessibility and interpretation of economics statistics as well as our understanding of the past.³

In this introduction, we define the intellectual space in which scholars once worked and are now currently operating, relating current trends to the broader fields of economic history and economics, and suggest areas that are still ripe for further development. Most importantly, this special issue of *Explorations in Economic History* showcases five articles that are representative of the range of topics, data, and questions that make China one of the fastest growing and most interesting areas for current research in economic history.

2. The “Clio” Revolution in China

The emergence of the “new” economic history of China was, to a certain degree, triggered by the so-called “Great Divergence” debate over when and why the Industrial Revolution and modern economic growth did not occur first in China. An initial problem in furthering our understanding of the debate was the asymmetry in the quality and quantity of economics statistics between China and the West as pointed out by Allen et al 2011: “One thing is clear about this debate, and that is the fragility of the evidence that has been brought to the issue. Most of the comparative studies relied on indirect comparisons based on scattered output, consumption, or demographic data. The few that attempted comparisons of direct income were largely based on scattered information about wages and prices in Asia. Our knowledge of real incomes in Europe is broad and deep because since the mid-nineteenth century scholars have been compiling databases of wages and prices for European cities from the late middle ages into the nineteenth century when official statistics begin”. (Allen et al 2011, p. 9). The long existence of many western economies’ statistical bureaus offers a stark contrast to China, which only started national level statistical surveys in the early 20th century.

As a result, “Clio” started by collecting and compiling basic long-run data series to make inferences about international comparison in living standards between Western Europe and

³ For an example of how the challenges of working with Chinese historical archives and economic statistics shapes research, see See Ma and Yuan (2016), who describe their unusual encounter and rediscovery of a set of Chinese merchant account books for the years of 1800-1850.

China. These included wage series as well as attempts to construct more comprehensive indices of income measures such as GDP, both at the national and regional level.⁴ Income and wage data were complemented by efforts to construct other long-term series, including population (Cao 2001), measures of human capital (Baten et al 2010; Gao 2015), urbanization rates (Xu et al 2016), price indices (Peng 2006, Allen et al 2010, Liu Guanglin 2014), the money supply and public finances (Liu Guanglin 2014, 2015), and long-term interest rates (Peng et al 2008, Tang Jianjun 2016, Keller, Shiue, and Wang 2016). Although collection efforts continue (as do the critiques of some series), it is clear that these long-run statistics have laid a solid foundation for understanding of the development of the Chinese economy and helped to pinpoint the specific timing and magnitude of the Great Divergence.⁵

3. New Directions

A recent wave of scholarship has been moving in a different direction, delving further into the causes of the Great Divergence but also going beyond this debate.⁶ A distinctive feature of this second wave of research is the vigorous application of economic theory and modern statistical techniques to examine the underlying mechanisms driving economic development and growth within China. For example, applying the theoretical frame of institutional analysis, Greif and Tabellini (2016) examine the comparative role of cultural values on the formation of economic institutions in Western Europe and China. Bai and Kung (2011) analyze the long-run (two millennia) relationship between natural disasters, climate changes, and incidences of warfare in Chinese history. Likewise, using information from thousands of local gazettes, Chen and Kung (2016) exploit the variation in the timing of the introduction of new world crops (such as maize) at the prefectural level to test their effects on Chinese population growth during the 17th and 18th centuries. A distinctive feature of Chinese history is the early rise of a bureaucratic state ruled under by an absolutist ruler, and a state that became increasingly unified under a single ruler over time. Since, this trajectory contrasts sharply with other parts of the world (in particular Europe), a considerable amount of new research on China is exploring the long-run evolution of state formation and state capacity (Chiu, Koyama and Sng forthcoming, Moriguchi and Sng 2014, Rosenthal and

⁴ See, for example, Broadberry, Guan and Li (2016), Li and van Zanden (2012), Xu et al (2016a, 2016b) and Ma, de Jong, and Chu (2014)

⁵ For further information on how these data are being employed in efforts to construct a global data set on incomes, see Bolt and van Zanden (2014).

⁶ See Brand, Ma, and Rawski (2017) for a recent review of the state of the Great Divergence debate.

Wong 2011, Sng 2014). The impact of political regime on long-run monetary stability is explored by Qian and Wu (2014), who construct dynamic models in an attempt to explain the factors that constrained government debasement of copper coins.

Researchers are also using modern statistical techniques and neoclassical theory to focus their lens on particular periods within Chinese history and shed light on a much wider range of sub-fields within economics (including corporate governance, industrial organization, human capital formation, public finance, international trade, and monetary economics), thus building the foundations for a new economic history of China. Much of this literature will be discussed within the context of the five articles featured in this special issue, so we highlight only a couple of additional examples to draw attention to other areas of scholarly activity. One type of study looks at “classic questions” found in the new economic history of other countries and considers them in the Chinese context. Along these lines, detailed regional grain price statistics for China are enabling scholars to test empirically when markets integrated and whether they were efficient (Shiue 2002, Keller and Shiue 2007 and Peng 2008, 2016). Another burgeoning type of analysis takes a period of Chinese history that has received attention from earlier scholars, but asks new questions. For example, western scholars have long been fascinated in understanding China’s performance on the silver standard during the Great Depression and comparing it to countries that were on the gold standard (Friedman and Schwartz, 1963). In Braggion, Manconi, and Zhu (2016), they reorient the lens and use a *western* shock to look at effects *within* China. Using a hand-collected dataset of loan contracts to individual firms, they test whether the shock of the 1933 U.S. Silver Purchase induced a severe credit contraction that led to labor unrest and support for the nascent Communist Party.

To illustrate more specifically how scholars are unearthing new data and using new techniques to shed new light on China’s past, we now turn our focus to the five articles appearing in this special issue. They neither span all periods of Chinese history nor all sub-fields within economics. Rather they are meant to take the pulse of the new economic history of China as it stands in 2017, and to showcase cutting-edge scholarship of this sort that is taking place both within China and beyond its borders. They draw on novel data sets that prove particularly useful for elucidating the behaviour of households, firms, and industries within China and help us consider China’s role in shaping global history.

Despite their non-representative sampling of Chinese history, the five articles appearing in this special issue nevertheless span nearly 400 years of recorded history. The first article follows the long-run perspective used in the first large wave of the new economic history and examines “well-being” over the period 1660-1898. However, its focus is entirely different from the earlier scholarship in that it focuses on an aspect of societies –that has only recently begun to receive attention from economic historians – interpersonal violence. The next two articles draw attention to aspects of economic change during the late Qing dynasty – the welfare effects of the growth in domestic trade and the provision of local public goods. The final two articles assess how the transition from the end of dynastic rule to the republican period influenced Chinese educational institutions and the process of economic development and how political shocks affected migration and wealth accumulation. While these articles vividly illustrate how novel data combined with credible identification strategies (natural experiments, diff-in-diff, etc.) can fundamentally revise or improve our understanding of Chinese history, they are also careful and nuanced, paying attention to the many challenges and limitations of measurement in these historical settings and the subtleties of Chinese institutions that previous generations of scholars have documented.

The special issue begins with a fresh perspective on the more than 300 years of Qing dynasty rule – a turbulent period whose zenith was characterized by the largest territorial empire in history (with a third of the world’s population and the largest economy at that time), but was ultimately crippled by repeated foreign invasions and the Taiping Rebellion, and coincided with the demise of dynastic rule in China. In “Social-Economic Change and its Impact on Violence: Homicide History of Qing China,” Zhiwu Chen, Kaixiang Peng and Lijun Zhu assemble an impressive new data set on interpersonal violence spanning this era. The article contributes to a newly-emerging literature that documents long-run changes in interpersonal violence and attempts to relate these measures to existing indicators of development, such as standards of living and human development index (Elias 2000, Pinker 2011, Gurr 1981).

Because local governors during the Qing dynasty were required to report information on crimes that were subject to capital punishment to the central government, the authors are able to compile data on homicides from the First National Historical Archives in China and use them to explore the time-series variation in homicide rates. It is noteworthy that the data sets compiled from what is equivalent to today’s Ministry of Justice (Xinbu) in Qing China have

long been used by historians in bits and pieces – in a narrative framework supporting the theory of “class struggle” according to the Marxist framework. Chen, Peng, and Zhu were the first to comprehensively compile and digitize these data and employ them in a different context, as a potential measure of well being.

Their analysis shows that the national homicide rate rose dramatically between 1661-1821, but declined thereafter. Despite the rising violent-crime rate in the first half of the Qing dynasty, the rate during this period appears to be on the low end of estimates for Europe at this time (Eisner, 2003). While this finding thus suggests that an interesting avenue for future research would be to explain the differences in these rates with pre-modern Europe, the focus of this article is internal. It exploits the variation in homicide rates within China’s borders, and develops potential explanations such as Malthusian factors (population pressure and survival distress) and the potential role of the state in creating an orderly society, for explaining the observed differences across regions and over time. The analysis suggests that provinces with higher population density and higher grain prices (reflecting both population pressure and food supply conditions) experienced higher homicide rates during the 18th and 19th centuries, especially if these provinces had, on average, less goods-market integration, lower state capacity, and fewer gentry. The empirical evidence seems to suggest that these same factors help to explain why interpersonal violence rates then declined after 1821.

In the second article of the special issue, “China’s Domestic Trade during The Treaty-Port Era,” Wolfgang Keller, Javier Andreas Santiago and Carol H. Shiue examine the development of internal trade during the Qing Period. Research on transportation innovations and internal improvements are a staple of economic history, with the first large wave of literature focused on explaining how such changes influence productivity, market integration, and the relative prices of moving goods.⁷ More recently, scholars have been revisiting this topic to learn more about how declining trade transport and trade costs influence the pattern of trade within countries, especially in periods when it has been documented that trade costs declined dramatically, such as the latter half of the nineteenth century (Jacks, Meissner, Novy 2011). For example, Donaldson (forthcoming) and Donaldson and Hornbeck (2016) employ general equilibrium trade theory and large, disaggregated data sets to examine how

⁷ The literature is, of course, vast and foundational in new economic history. A few classics include North (1958, 1968), Harley (1971, 1988), Fogel (1964), Fishlow (1965, 1966), and Haites, Mak, and Walton (1975).

transportation improvements improved “market access,” lowered trade costs, and increased interregional trade.

In this vein, Keller, Santiago and Shiue employ commodity level-trade data for 15 “treaty ports” to demonstrate how declining trade and transportation costs affected the size of welfare gains and their distribution across China in the late Qing dynasty.⁸ This paper highlights how scholars working on Chinese economic history today are making use of sophisticated general equilibrium trade models to shed light on historical processes (Mitchener and Yan, 2014). With their model that takes into account how a shock in one region affects another, they demonstrate that the welfare effects of trade depend critically on each port’s productivity, China’s economic geography via trade costs, and the degree of regional diversity in production, and then go on to measure the relative importance of these effects using the unique port-level data available in CMC records (part of which now available to researchers at Second Historical Archives in Nanjing). Their research thus also contributes to a growing body of work of research studying the outcomes in and effects of “treaty ports” (Keller, Li and Shiue 2012, So and Myers 2011, Jia 2014) as well as new research employing the detailed and carefully compiled records of the CMC to examine the impact and pattern of external trade on the Chinese economy (Keller, Li and Shiue 2012, Mitchener and Yan 2014).

During this period, China’s internal trade was enhanced by the creation of the Chinese Customs Maritime System, which collected tariffs and administered internal and external trade emanating from the so-called treaty ports; it also introduced a variety of internal improvements that lowered the cost of moving goods within China, including dredging harbors, opening up lighthouses, and providing increased protection from pirates. As a result, the authors find that trade barriers related to geographical factors were between 3 and 9 times lower in 1904 than in 1879. Moreover, when a central-trading hub such as Shanghai experienced a productivity shock, the authors find that the welfare effects spilled over to other ports (and thus likely to China as a whole). For example, a port like Swatow – located roughly 1,300 kilometers from Shanghai – saw its welfare increase by 13% due to the improvement in technology in Shanghai, but others like Tianjin saw their welfare fall due to changes in factor costs, income, and production patterns (as captured in their general

⁸ Treaty ports are designated ports in China opened for the free flow of goods and services according to a series of treaties signed between the Qing and various Western powers during the second half of the 19th century. See So and Myers (2011).

equilibrium framework). They further find that the benefits accruing from comparative advantage (the sources of gains from trade in their model) *across the regions of China* are smaller in comparison to those accruing across countries in the late 19th century.

The third article, “Friends from Afar: The Taiping Rebellion, Cultural Proximity and Primary Schooling in the Lower Yangzi, 1850-1949” contributes to a growing literature in economics that considers how heterogeneity in the characteristics of a society’s population influence the provision of public goods (Easterly and Levine 1997, Alesina, Baqir, and Easterly 1999, Alesina and Ferrara, 2005). Because ethnic cleavages are often the result of dramatic changes in policy or shocks, history often provides clues as to the origins of such divisions. Along these lines, Yu Hao and Melanie Meng Xue draw on the massive population shock resulting from civil war in south China that occurred between 1850-1864 – commonly known as the Taiping Rebellion. This cataclysmic war led to a conservative estimate of 17 million deaths, a large decline in the region’s population, and a subsequent and significant migration into the region. Because these events led to a mixed population of locals and migrants, Hao and Xue use this historical shock to look at public goods provision, such as schooling. Their statistical analysis is indicative of a common methodological approach found in the new economic history of China – the use of plausibly exogenous historical shocks to identify causal economic outcomes – and one that seems to be demonstrating that research in Chinese economic history can attract broad audiences, including general-interest economic journals.⁹

The empirical challenge they faced was to identify the two groups – migrants and locals – without household level survey data, which as noted earlier, are largely unavailable in China prior to the early 1900s. Their novel identification strategy is to measure “cultural distance” between “natives” and “migrants” using a newly-compiled data set of Chinese surnames for roughly 100,000 individuals over the course of 150 years. The approach of using surnames as an indicator of social distance builds on two recent trends in economic history: (1) the use of surnames for making inferences about economic outcomes (reflected in the recent work of Greg Clark and co-authors who use them to measure social mobility in England and Europe) and the use of China’s rich genealogical records in the absence of household surveys (Shiue

⁹ For additional examples, see Bai and Kung (2011) and Bai and Jia (2016).

2016).¹⁰ Using their surname database, they calculate the change in the surname-mix before and after the Taiping Rebellion as an indicator of local of cultural distance between locals and migrants, build standard measures of population heterogeneity (fractionalization and polarization), and then use these to analyze the provision of public schools in two Lower Yangzi counties – long after the Taiping Rebellion ended.

Because the authors argue that, for historical reasons, migration was plausibly exogenous to the cultural distance between migrants and natives, they are able to establish a causally negative effect of migration on the provision of public schooling (further backed up by IV estimates) in the period after 1905 – when schools were established via local initiative and funding. That is, a high degree of population homogeneity at the county level contributed to greater level of provision of modern public schooling than counties with relatively more migrants. However, these positive effects at the local level disappear in decades when modern primary schooling was increasingly provided by central authorities. Understandably, population homogeneity mattered little to the provision of secondary schooling, which were centrally provided. For historians of China, their findings provide significant new insights on the enduring debate on the mixed impact of the abolition of the millennial long traditional Civil Service Examination system in 1905. Their works show specifically how the rates of success and failures of the modern education movement could vary according to the specific features of local population and the schooling level.¹¹

The fourth article in the special issue continues with the theme of education, but changes the focus from schools – institutions that promote the development of human capital – to the content of what is taught within them. Economists and economic historians have long posited a causal link between the “quality” of educational inputs and labor-market outcomes, such as earnings and occupational choice.¹² However, it is often difficult to find a historical setting and the requisite data for estimating whether such a relationship exists as well as its quantitative importance. Noam Yuchtman’s article finds an interesting experiment in the transition period from imperial to Republican China to test this question and, more broadly, to shed light on the contours of the evolution of human capital within China – an important

¹⁰ For a broader discussion of the use of surname distributions to measure social mobility over time, see Clark, Cummins, Hao, and Vidal (2015).

¹¹ For a regional perspective on the long-run trends in the provision of mass public schooling in China, see the recent work of Gao (2015). Also see Chaudhary et al 2012 for an international comparison.

¹² See, for example, Hanushek and Kimko (2000) on labor force quality and Goldin’s (2016) emphasis on the practical aspects of early American education in contrast to Europe.

issue for understanding its long run development and one that is receiving increasing attention among new economic historians of China.¹³

In “Teaching to the Tests: An Economic Analysis of Traditional and Modern Education in Late Imperial and Republican China,” Yuchtman assembles a unique data set on employee records from the Tianjin-Pukou Railroad to identify differences in labor-market outcomes that are associated with studying the traditional curriculum (one that emphasized the Confucian classics and was part and parcel of the centuries old imperial system) versus a new, second track, which was introduced in the late 19th century and emulated Western education by teaching subjects like science, law, math, and engineering. Although his analysis focuses on observations from only one industry, the data are incredibly rich in other dimensions: it allows salary and occupational comparisons for individual employees of the same firm who previously had studied either traditional or modern subjects during the same period of operation of the firm and contains a rich set of individual employee characteristics (province of origin, age, tenure with the railroad), which can be utilized as control variables in Mincerian-style wage regressions. That said, Yuchtman has to address several interesting data and methodological challenges including non-random educational attainment and the fact one third of the workers’ records list pay grades rather than salaries to arrive at plausible estimates.

The econometric results suggest that both the modern and traditional educational track yielded wage premiums over less skilled workers, but the data suggest that they were substantially higher for workers who studied the western track. For example, those with university degrees in engineering earned roughly 100 percent higher relative those receiving the very highest traditional educational training). In terms of occupations, those trained in the traditional system were more likely to work in the clerical department of the railroad whereas managerial and technical positions within the railroad firm were more likely to be filled by those who had taken the western education curriculum. The paper’s findings thus have important implications for Chinese development as the imperial system’s educational institutions appear to have delivered differentially less human capital than the modern system.

¹³ For a different strand of the literature on how China’s human capital influenced the country’s development, see Bai and Jia (2016), who examine how the abolition of elite recruitment for the civil service examination influenced the country’s political stability.

In the final article of this issue, Dan Li and Nan Li pick up on the earlier subject of internal migration and shocks, but focus on how shocks to areas where migrants are settling can lead to long-term effects on wealth accumulation. “Moving to the Right Place at the Right Time: Economic Effects on Migrants of the Manchuria Plague of 1910-11,” focuses on one of the prominent long-distance migrations of the late 19th and early 20th centuries – the movement of millions of Chinese, primarily from the northern provinces of Shandong and Hebei to Manchuria (Northeast China), their particular location decisions, and how these influenced subsequent welfare. Li and Li focus on the long-term consequences of the pneumonic plague of 1910-11 to show how initial arrival conditions in a host locality affected the subsequent economic welfare of migrants. In particular, they look at how the accumulation of wealth in the form of land for new immigrant was influenced by this disease shock. Their research thus contributes to our understanding of how initial conditions influence migrant location and timing decisions (Borjas 1991) as well as economic outcomes, such as earnings potential or wealth (Stewart and Hyclak 1984).

Using data from a rural household survey in the mid-1930s and variation in village exposure to the plague they first compare migrants who settled in villages that had experienced the plague versus those that settled elsewhere and find that the former, on average, held more land. However, these effects are attenuated when examining migrant cohorts. That is, those that migrated soon after the plague hit, in 1912-13, owned the most land relative to those settling elsewhere (110% more). Similar, but smaller differences in wealth holding (in terms of land) persist for migrants coming in the next four years, but thereafter the differences are statistically insignificant. The results do not seem to be driven by selection on observable characteristics of immigrants; rather earlier arriving immigrants seized the opportunity to claim vacated land. By exploring these micro-level data sets, their findings reveal the specific mechanism as well as the role of plague behind this massive migration in modern Chinese history. Given contemporary China’s current rural to urban migration - unprecedented in recorded human history, the articles by Xue and Hao and Li and Li also show how China’s past provide significant insight to the present and future.

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