

# **China's Long-term Economic Growth: Retrospect and Prospect**

**Preliminary report on a review essay**

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# The Aim of This Presentation

- We are working on a major review article on China's economic history since 1368
- We aim to produce a review that is comprehensive, balanced, and oriented toward future research opportunities
- Since the subject is vast, we welcome feedback and advice

# Agenda for the Review Essay

- Motivation
- Overview of “received wisdom”
- New ideas challenge long-standing views
- Varieties of available data and evidence
- Critique #1: interpretations outrun data
- Critique #2: neglect of political economy
- What is the core of reliable knowledge?
- Promising areas for future study
- Historical links with PRC growth surge

# Why re-examine the field of Chinese economic history?

- PRC surge → focus on antecedents
- Context: wider Asian growth experience
- MEG in early 20<sup>th</sup>-century China?
- New favorable views of Qing institutions (Zelin, Wong-Will, etc.)
- California school: “Great Divergence” of incomes begins only in the 19<sup>th</sup> century
- New perspectives on MEG (Romer, Acemoglu, Gaylor-Howitt)

# Long-standing Ideas

- Unified empire, impersonal bureaucracy
- Long history of intensive agriculture, technological innovation, domestic & international commerce
- Confucian education & values
- Stagnation/decline following Song peak
- Because
  - Family size & Malthusian pressures (K. Chao, P. Huang)
  - lack of political competition (Mokyr)
  - elites disdain commerce, and
  - social structure obstructs development
  - restrictions on overseas trade
- So slow response to European challenge
- Thus China becomes a poor laggard

# Economic Perspective: Accentuate the Negative to Explain China's Failure to Modernize

State: arbitrary, corrupt , resists innovation

Economy: emphasize poverty, exploitation, oppression

Society: familism → nepotist, personalist, particularist ties

Confucian values/education obstruct or not conducive to modernization

Above views shared by May 4, CCP, early PRC, and intl scholars, who agree: China lacks prerequisites for MEG

Thus, long-term stagnation is not difficult to explain.

# Recent Developments Undercut this Analysis

- China now seen as an economic success, rather than failure!
- Need to consider possible historical antecedents of China's growth spurt
- And, new research challenges many facets of "received wisdom" regarding Ming-Qing China

# New Historical Findings: 1

- State did not neglect economic matters
  - Bureaucracy included economic specialists
  - Govt maintained granaries (Wong-Will)
  - Constrained fiscal system (Zelin)
- Gentry sought to promote prosperity
  - Major role in urban management (Rowe)
  - And in water control (Perdue)
- Purposive demographic behavior (Lee et al)



# New Findings: 2

- Science did not wither (Needham, Elman)
- Literacy, publishing extend beyond elites (E. Rawski, Brokaw)
- As does numeracy (Baten et al)
- Vibrant economic institutions
  - Customary and formal law, contracts (Myers-Chen, P. Huang, Zelin-Ocko, M. Cohen)
  - Industry studies show effective business organization (L. Li, Zelin, Mazumdar, Gardella, many others)

# New Findings: 3

- Efficient Marketing Systems
  - Hierarchy of local & regional markets (Skinner)
  - Expansion of markets (E. Rawski, Rozman)
  - Complex organization and growing scale of trade (Ch'üan-Kraus; Amano, Wu Chengming, etc.)
  - Limited price variation (vs. Europe) even in famine (Yeh-chien Wang)
  - Market integration (W. Keller & C. Shiue)
- Modern Economic Growth begins 1900-37
  - Regional (Eckstein, Ma) & national (T. Rawski)

# New Findings: 4 Calif. School

- No big China-Europe divergence before 1800
- Advanced region living standards roughly comparable
- Broad similarities: commercialization, demographics
- Great Divergence emerges only following IR
- Which originates in Britain thanks to accidents of abundant coal and land-intensive colonial imports
- Result: big push toward global analysis & interpretation
  - China study no longer isolated, peripheral
  - China-Europe comparisons proliferate (vanZanden & Li)
  - Pomeranz ideas influence Allen's work on British IR

# Varieties of Data & Evidence: 1

- Systematic quantitative data include
  - Official records: population, land, public finance, mints (for copper), grain prices
  - Maritime Customs data on trade (from 1860s)
  - Earlier data on overseas trade & silver flows
  - Recent studies use data on wages, prices, heights to study trends in living standards

Usual issues of coverage, possible distortion

# Varieties of Data & Evidence: 2

- Immense documentary record
  - Local gazetteers, with economic sections
  - Government documents: memorials, edicts
  - National and local archives
  - Contracts, private account books
  - Criminal cases reveal land tenure practices
  - Handbooks for merchants, farmers, officials
  - Records of weather, harvest, famine

and much more

# How Research Has Evolved: 1

- Individual studies illuminate specific areas
  - H.B. Morse on international trade and diplomacy
  - Zhang Zhongli on gentry income
  - F. King on late Qing money/monetary policy
  - A. Feuerwerker on *Guandu shangban* firms
  - Y. Muramatsu on landlord bursaries

# How Research Has Evolved: 2A

- Develop data to address broader issues
  - Liu and Yeh – National income 1933-1959
  - Perkins – agricultural trends 1368-1968
  - Myers, Huang – survey data → rural economy
  - Brandt – how trade affects domestic economy
  - T. Rawski – National GDP study for 1912-37
  - Eckstein et al, Ma – regional income growth
  - S. Ho – economic growth in colonial Taiwan

# How Research Has Evolved: 2B

- Characteristics of these studies
  - Careful attention to data issues
  - Extensive documentation
  - Limited generalization
  
  - Also limited impact, especially outside the China field. Little or no interaction with broader international field of economic history



# How Research Has Evolved: 3

- California school – different approach
  - Bold, sweeping generalizations
  - Novel, challenging interpretations
  - Strong emphasis on international comparison

Big benefits: major shift toward comparative research, now **INCUDING** China

China research no longer isolated, neglected

# How Research Has Evolved: 4

- Except for imports & exports, no solid data with less than 10% error margin before 1930s (GDP), 1950s (population, crop output) or even later (cultivated acreage)
- So quantitative statements about levels or trends in output (overall or specific products), per capita income etc. are not convincing
- The same applies to Maddison's efforts to sketch long-term economic trends for China

# Examples of Data Problems: 1

- Imperial census data have big error margins
- Early Ming and late 18<sup>th</sup>-century Qing population totals appear reasonably accurate
- 1850s Qing figures appear too high (Skinner)
- Which muddies 1850-1950 population trends
- Micro-demographic data require demanding assumptions; also offer limited coverage of regions, time periods, ethnicities
- Conclusions:
  - Hard to verify Malthusian claims re late Qing
  - Without reliable population data, hard to specify levels or trends of per capita income

<b>Selected Population Estimates Show Wide Error Margins</b>						
<b>(Millions)</b>						
		<b>Source of Data/Estimates</b>				
<b>Year</b>		<b>Chao</b>	<b>Perkins</b>	<b>Lee/Saito</b>	<b>Liu/Huang</b>	<b>Ho</b>
<b>1400</b>	<b>Early Ming</b>	<b>60</b>	<b>65-80</b>	<b>90</b>		<b>65</b>
<b>1500</b>				<b>125</b>	<b>103</b>	
<b>1600</b>		<b>200</b>	<b>120-150</b>	<b>200</b>	<b>160</b>	<b>150</b>
<b>1650</b>	<b>Ming-Qing Succession</b>	<b>70</b>	<b>100-150</b>		<b>123</b>	
<b>1700</b>				<b>200</b>	<b>138</b>	
<b>1750</b>			<b>200-250</b>		<b>260</b>	
<b>1800</b>		<b>295</b>		<b>350</b>	<b>340</b>	<b>313</b>
<b>1850</b>	<b>Taiping Rebellion</b>	<b>426</b>	<b>385-435</b>		<b>412</b>	<b>450</b>
<b>1900</b>			<b>360-405</b>	<b>500</b>	<b>400</b>	
<b>1953</b>	<b>First PRC census</b>		<b>568-598</b>			<b>583</b>

# Examples of Data Problems: 2

- Systematic efforts to measure output of individual crops begin in the 20<sup>th</sup> century.
- Even so, output of specific crops – rice, cotton, etc. remains shrouded in uncertainty prior to 1949.
- Conclusion: efforts to specify output, yield, acreage of specific crops beyond the local level before 1900 are not trustworthy.

# Agricultural Summary Based on Perkins

<b>Year</b>	<b>Cultivated Area</b>	<b>Percent in Grain</b>	<b>Cultivated Area in Grain</b>	<b>Grain Output</b>	<b>Population</b>	<b>Output per capita</b>	<b>Yield</b>
	<b>Million Hectares</b>		<b>Million Hectares</b>	<b>Million Metric Ton</b>	<b>Million</b>	<b>Metric Tons</b>	<b>Metric Tons per Hectare</b>
<b>1766</b>	<b>63</b>	<b>0.80</b>	<b>50</b>	<b>77.0</b>	<b>270</b>	<b>0.285</b>	<b>1.53</b>
<b>1850</b>	<b>78</b>	<b>0.80</b>	<b>62</b>	<b>111.2</b>	<b>390</b>	<b>0.285</b>	<b>1.78</b>
<b>1873</b>	<b>81</b>	<b>0.80</b>	<b>65</b>	<b>99.8</b>	<b>350</b>	<b>0.285</b>	<b>1.54</b>
<b>1933</b>	<b>98</b>	<b>0.80</b>	<b>78</b>	<b>142.5</b>	<b>500</b>	<b>0.285</b>	<b>1.82</b>
<b>1957</b>	<b>112</b>	<b>0.80</b>	<b>90</b>	<b>195.1</b>	<b>647</b>	<b>0.302</b>	<b>2.18</b>
<b>1977</b>	<b>135</b>	<b>0.81</b>	<b>109</b>	<b>283.3</b>	<b>950</b>	<b>0.298</b>	<b>2.60</b>
<b>2005</b>	<b>127</b>	<b>0.67</b>	<b>85</b>	<b>484.0</b>	<b>1308</b>	<b>0.370</b>	<b>5.68</b>

## Weak data → Premature generalizations?

- Pomeranz, Allen – emphasize cheap UK coal
- London coal cheaper than Beijing ca. 1700
- BUT R. Gibson (1914): pithead prices
  - Kailan & Fushun: expect under 4s per ton
  - Vs. England: 8s 3d
  - London price 2x, China delivered price 3x pithead cost – so coal 25% cheaper in China
  - Expect cost gap narrowed dramatically due to faster UK technical progress in 19<sup>th</sup> century
- Where does this leave the cheap coal thesis?

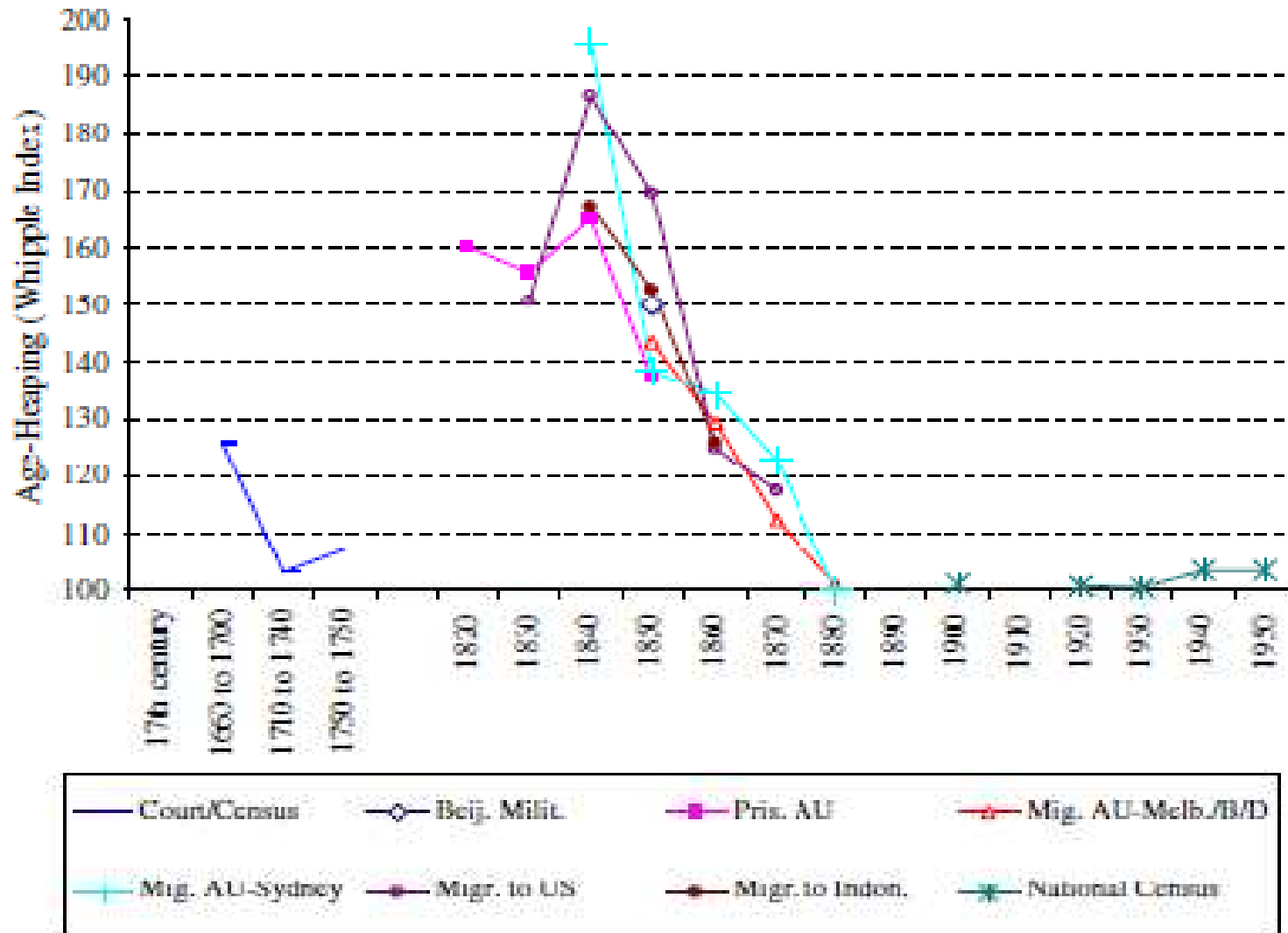
# Next step: Combine California's Reach with New Data Work - examples

- Cross-national comparisons using small samples of Chinese data on
  - Numeracy (Baten et al)
  - Consumption (Fukao et al)
  - Living standards (Baten et al)
  - Real wages (Allen et al)
- Following graphics illustrate some recent results

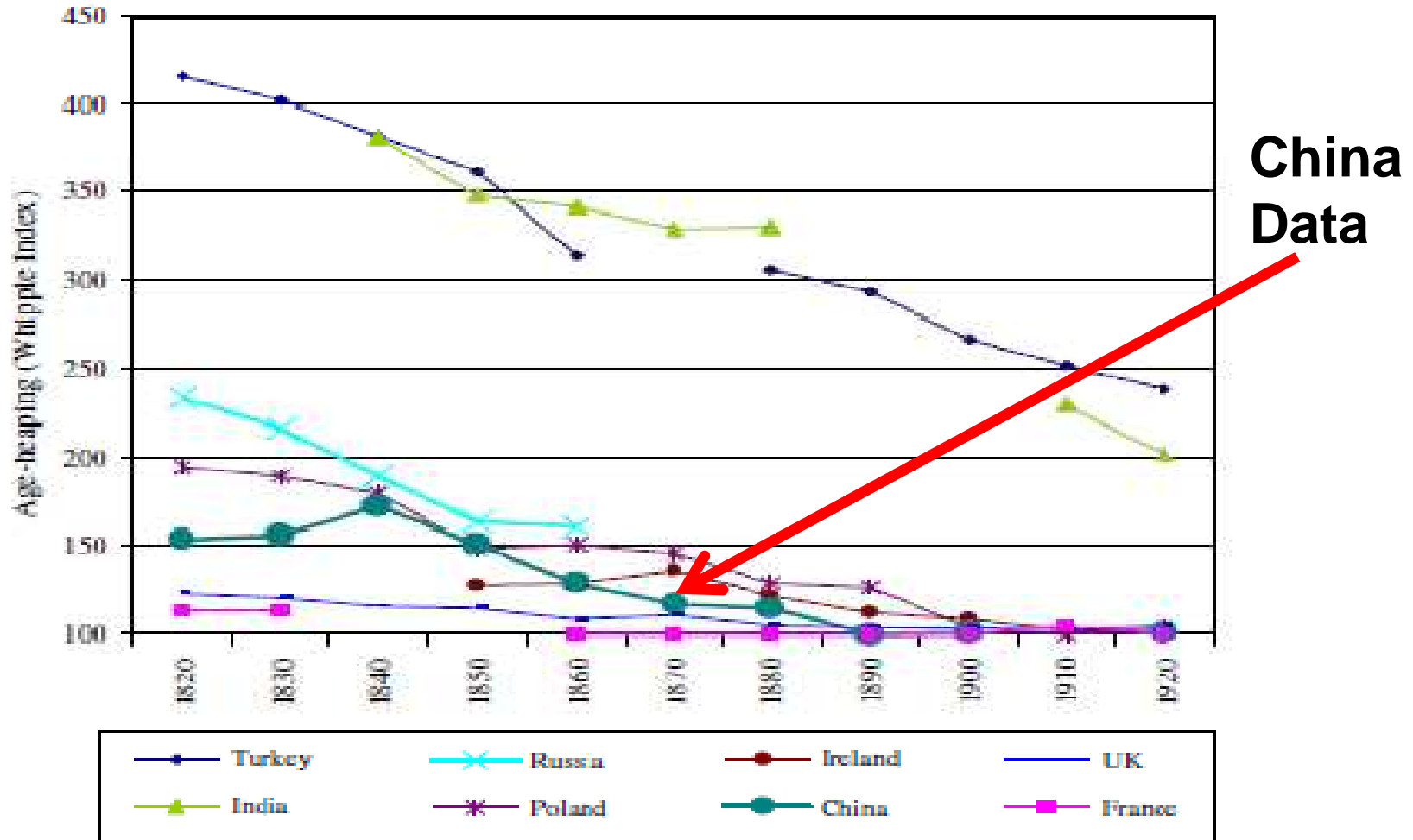


# Numeracy among Chinese populations

Declining measure → rising numeracy

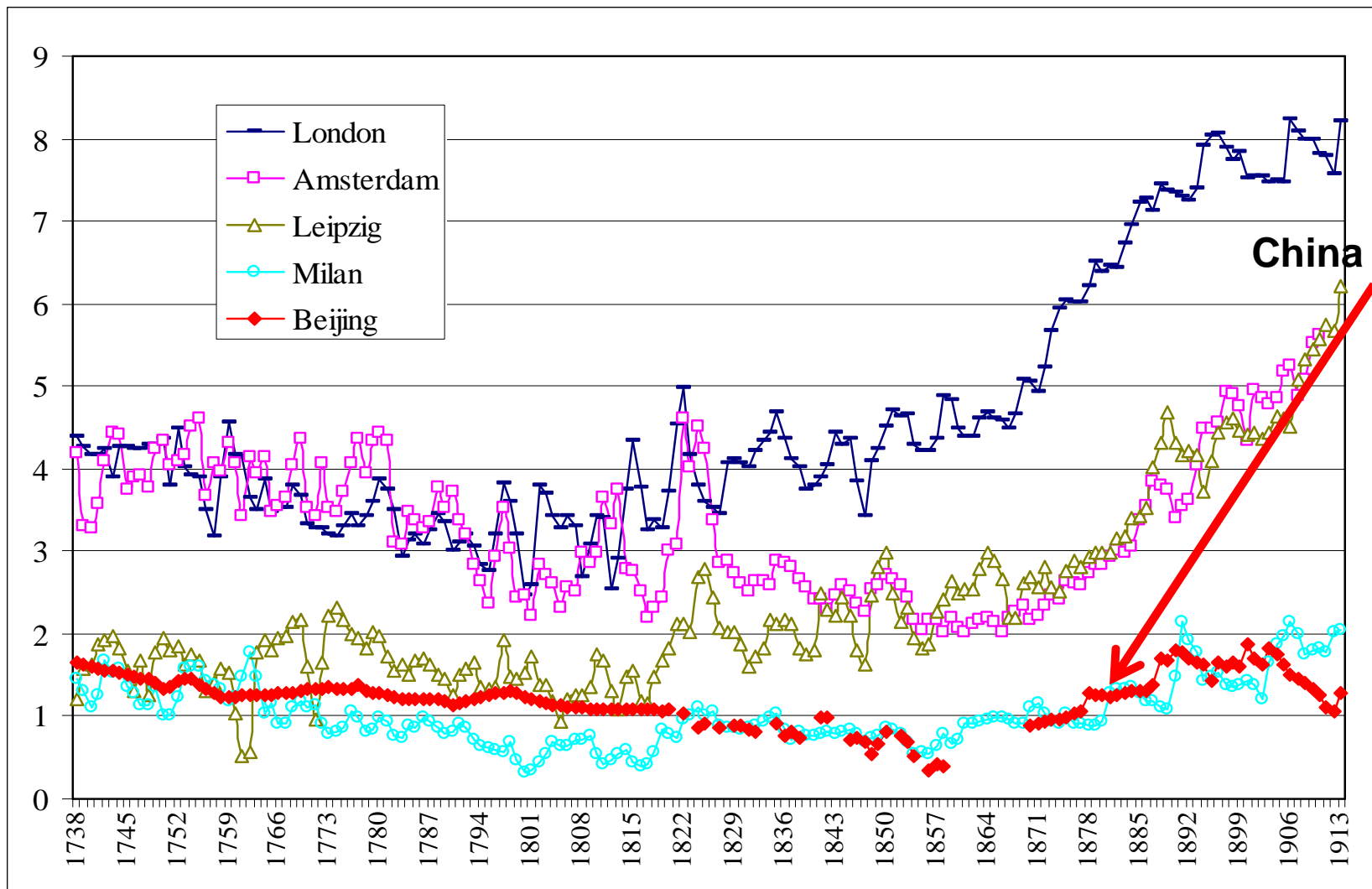


# Numeracy in International Perspective (lower line → higher numeracy)

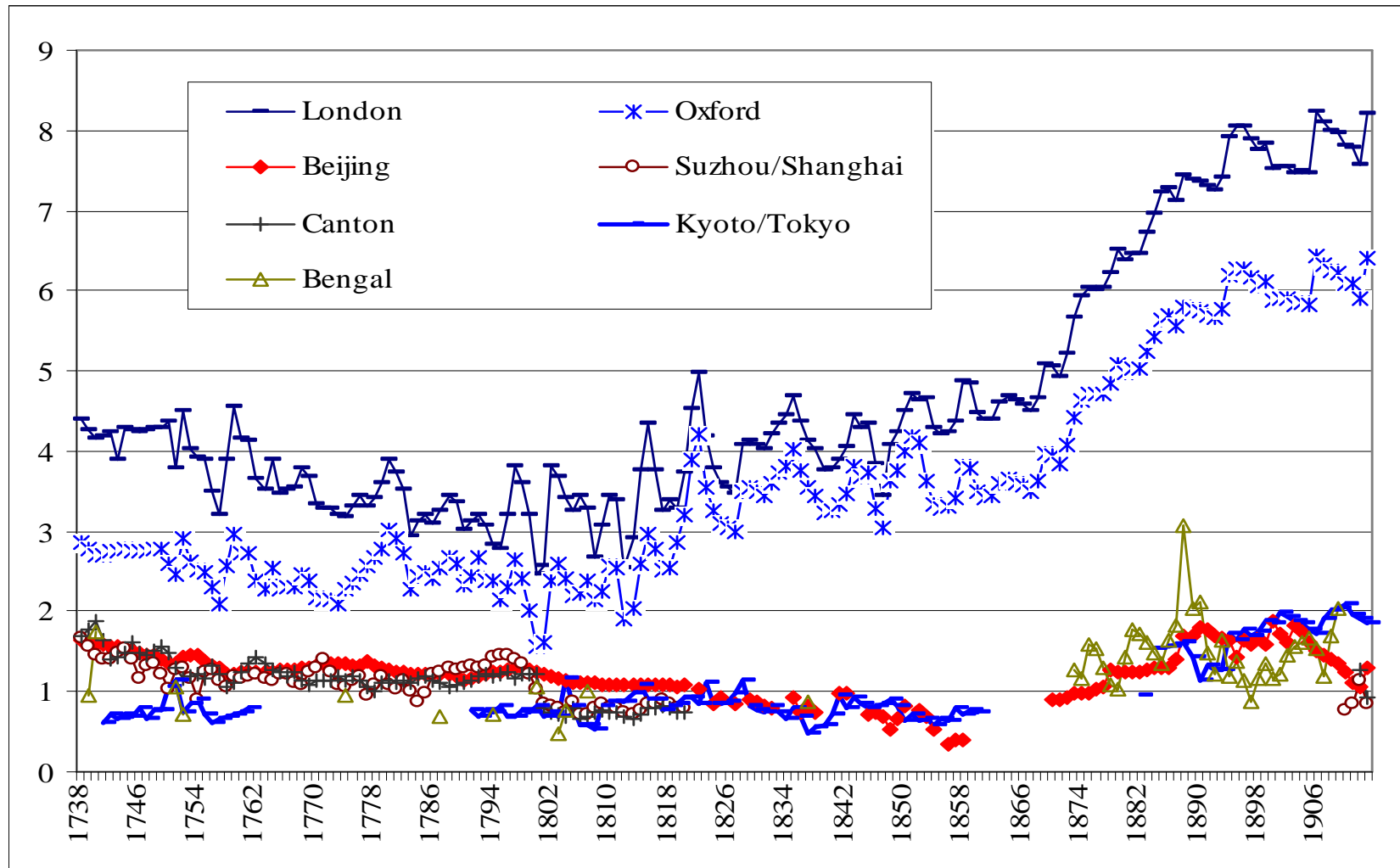


# Real wage trends in China and Europe

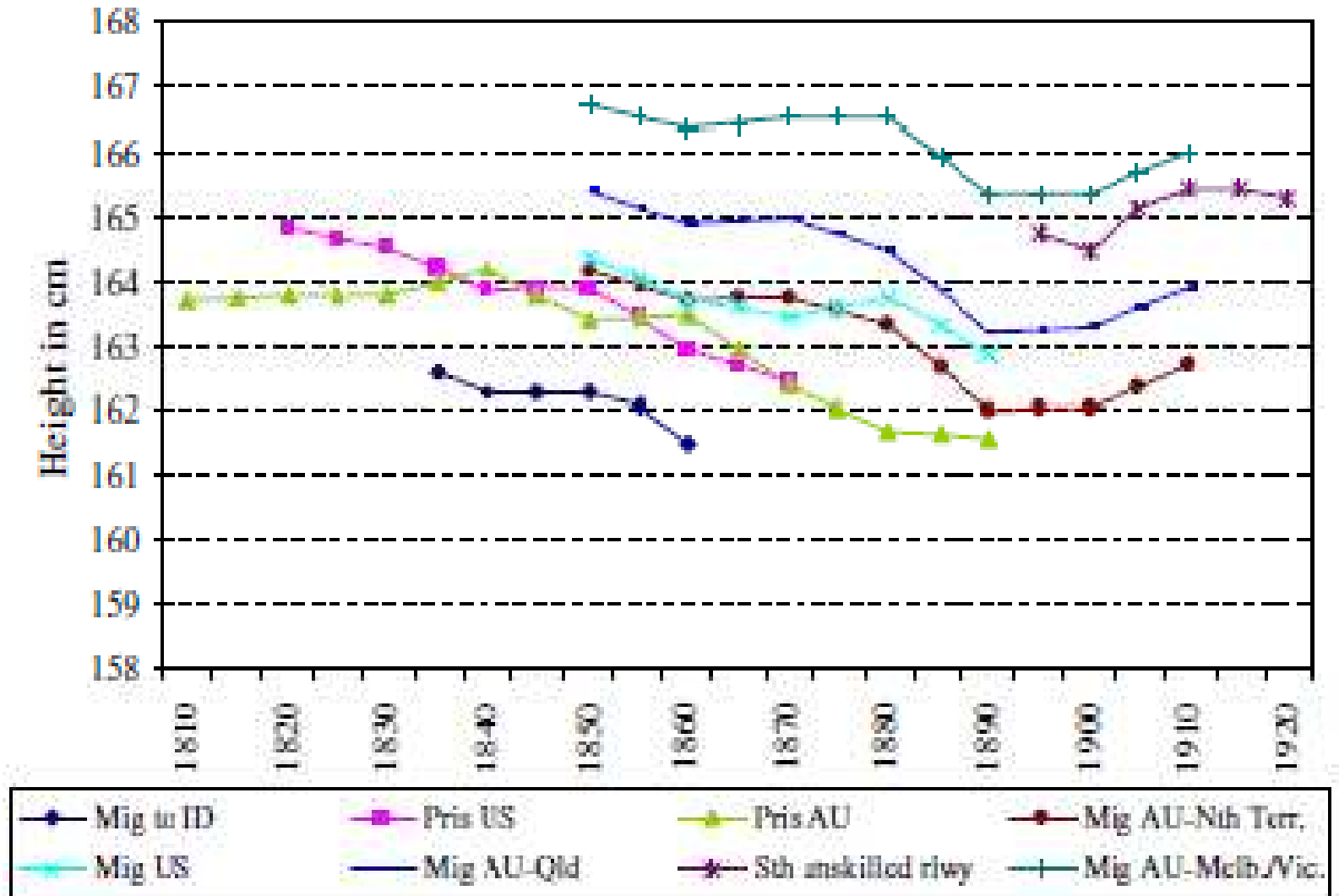
(Allen et al forthcoming Economic History Review)



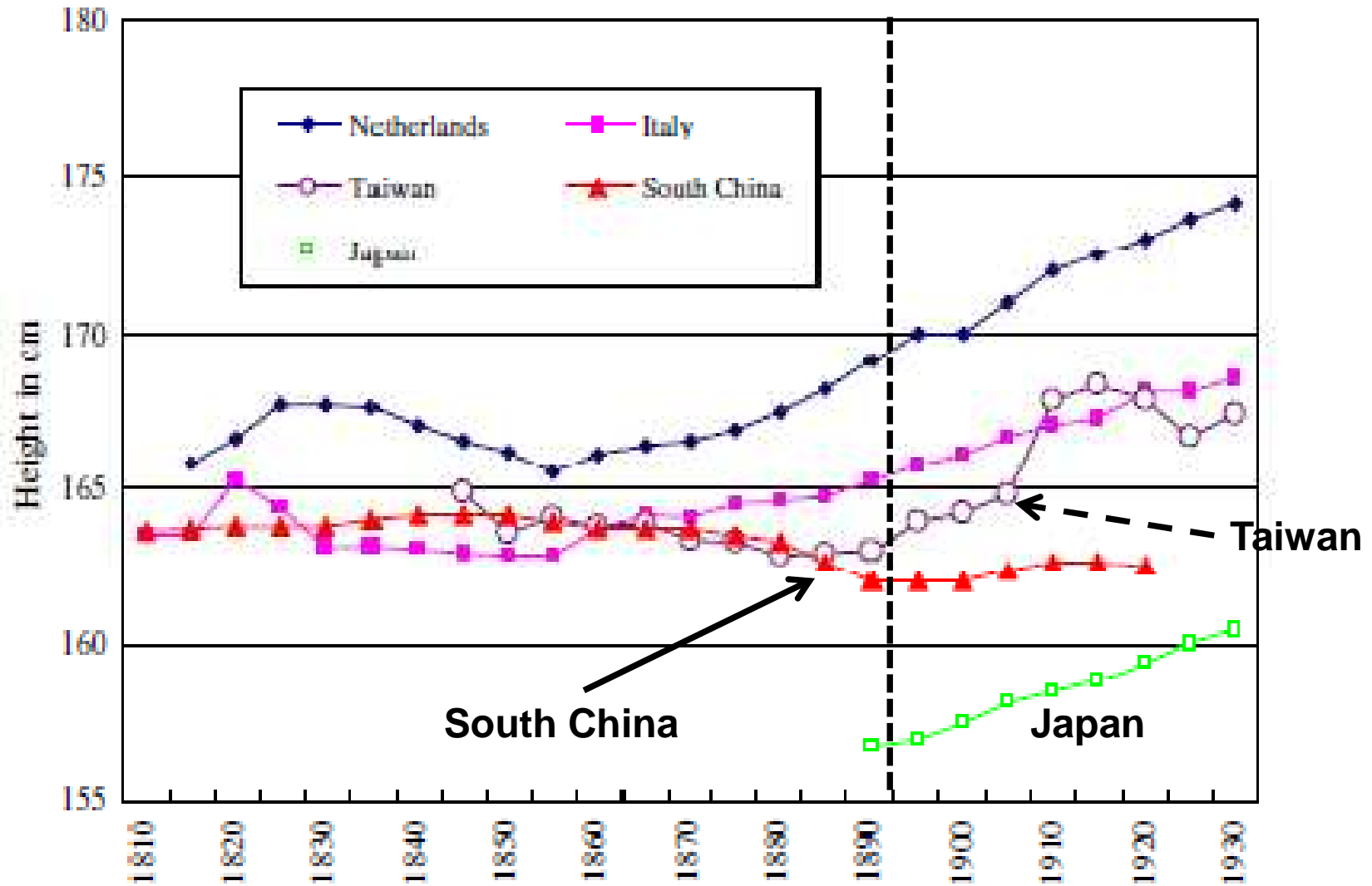
# Real wages 1740-1920: London vs. East Asia



# Height data for several Chinese samples (Baten et al)



# Height of Southern Chinese in Comparative Perspective



## New Findings 1: Two Phases of Divergences

- **The first divergence:**
  - **18<sup>th</sup> century living standards consistently higher for workers in London and Amsterdam than in Beijing, Canton, Suzhou, Tokyo, or Kyoto**
- **The second divergence:**
  - **Urban real wages in 18th century China and Japan resembled those in ‘peripheral’ Europe such as Milan and Leipzig (and perhaps Istanbul or Java?)**
  - **From the mid-19<sup>th</sup> century, real wages in the industrial core of West Europe (Leipzig) pulled ahead of China, Japanese wages followed suit in the early 20<sup>th</sup> century.**

New Findings 2: 19<sup>th</sup> century Chinese trends based on compilation of small population samples

- High and rising numeracy
- Downward drift of real wages, 1730s-1860
- Real wages rise, 1870s-1900, then fall
- Decline in stature 1850-1890 consistent with evidence of falling real wages
- Note that stature increases in Japan and Taiwan, but not in South China, after 1895



# A second issue with current literature

- Many authors (e.g. Elvin, K. Chao, Huang, Pomeranz, Li Bozhong) view factor and resource endowments as fundamental, adopting Malthusian or Boserupian (induced innovation) perspectives.
- But if **resources** provide the key constraint, **opening** should ameliorate or solve the problem – it allows China to import coal or mining equipment, or to reduce fuel requirements (and fund imports) by exporting products that consume little fuel.
- Why the big difference between China and (equally resource constrained) Japan, which faced the same open-economy provisions (often imposed by the same diplomats and companies), and populated the same trade network as China?

# Why no sign of economic acceleration after 1870?

- **Many favorable circumstances**
  - Free trade allows modest export growth
  - Growing imports can ameliorate resource limitations
  - Market economy with limited official intervention
  - Extensive mobility of domestic labor and capital
  - Modest improvements in transport, communication, finance
  - Recovery from Taiping Wars
  - FDI from West (and later Japan) introduces new technologies in manufacturing, transport, communication, finance
  - Government neutral or mildly disposed toward reform
- **Our suggestion: consider institutional obstacles**

Recent studies – especially the California school – tend to overlook institutions and political economy. We propose to focus attention on this subject.

# Institutional Obstacles to Innovation in 19<sup>th</sup> Century China?

- Many examples of **cooperation** between new and old: steamship & junk traffic, banks and *qianzhuang*, Western merchants and compradores; Chinese business learning from Western example (P. Zeitz)
- BUT – institutional opposition blocked some innovations
  - Silk in Canton (Ma); and Shanghai (S. Brown)
  - Cotton textiles (E. Motono, T. Suzuki, *Yomu undo*)
  - Bean oil processing (S. Brown)
  - Railways (S. Brown)
- Such obstacles extended into the 20<sup>th</sup> century
  - e.g. Tianjin transport guilds prevented local merchants from using trucks to break long-standing guild monopolies (Hershatter)

## Precursors of Future Institutional Change

- Competition between areas of Chinese and foreign administration
- Treaty ports as “mini-Hong Kongs” (Myers)
- Chambers of commerce
- Expansion of “modern” banking/finance

# 1920s and 1930s – Purposive Effort to Promote Development

- Under the Guomindang:
  - Fiduciary currency, establish Central Bank
  - Regain tariff autonomy
  - Industrial policy
  - Reform of public administration (J. Strauss)
  - National Resources Commission
- Under Japanese in Manchuria – industry, trade, transport. . .
- Both episodes influence post-1945 developments in China and in Taiwan

# Our Incomplete Perspective

- Calif. School focus on resources strikes us as incomplete
- Our instinct: must study structural factors to understand accomplishments and limitations of the imperial system
- So – we pursue political economy analysis focused on Qing

# The Role of the State and Institutions in Chinese Economic History

- The traditional (pessimist) view:
  - Oriental despotism, hydraulic society
  - Total power with maximum extraction and exploitation.
  - Marxist theory applied to Chinese State?
    - The struggle between the ruling class and the ruled.
- The optimist re-assessment:
  - Paternalistic rule of benevolence: low extraction.
  - high provision of public goods: dissemination of agricultural technique and best-practice, encouragement of new settlement and building of grain storage.
  - Or even developmentalism (?)
- Why the huge gap in views?

# New Institutional Economic Perspective of the State

- Mancur Olson's theory of predatory state (roving versus stationary bandits)
- North (Paradox of State) and North & Weingast (Credible Commitment)
- Acemoglu et al, Engerman & Sokoloff on the inter-connection between resource endowments and institutions.
- Greif's emphasis on the self-governed, self-interested corporate group (with coercive power) in Western Europe.
- North, Wallis & Weingast, Vockart: states as the seeker and defender of monopoly rents gained through controlling violence and social order.
- New Institutional Economics: The problem of information and incentives in an absolutist or autocratic state (neglected in both Olson's and North's formulations).
- The case of China is of particular interest:
  - Historical continuity in relative isolation
  - The enormity of size and longevity of empire
  - Precocious development of surprisingly “modern” institutions: bureaucracy, centralization and so on
  - Understanding information and incentives problems in a pre-modern empire may shed light on great divergence.



# I. The Chinese Model of Autocracy: The Birth of the Middle Kingdom

- The rise of a ruler-centered world in the Warring States period (403-221 BC )
- Birth of a Centralized state under the Qin (221-206 B.C).
- Main features of the new state:
  - Monopoly of rule under one emperor.
  - Elimination of hereditary aristocracy or other contending power.
  - Administrative bureaucracy to implement imperial rule
  - Prime Minister as private manager of the royal household.
  - Separation of ownership (emperor) and management (bureaucracy).
  - Empire as a Family Enterprise with outside management?

# The Model of a New State

- Three actors of the Model: the emperor, the bureaucrats and the masses [add gentry/landed elites as a fourth key element?].
- The emperor:
  - The symbol of the sovereign but with self-interest covers himself and Imperial Household.
  - Closest to an autocracy unconstrained by elites and unrepresentative of a ruling coalition or class (unlike in W. Europe (Marxism not applicable here)).
- The Bureaucrats: agents of the emperors for tax collection and administration.
- The masses:
  - independent units of production and consumption subject to taxation by the State collected by the bureaucracy.
  - Other social groups:
    - Imperial entourage (eunuchs, royal bondservants)
    - Local elites: gentry and village elders.

# The problem of institution design

- How can the emperor ensure loyalty from bureaucrats?
  - Create a system of nation-wide rotating bureaucracy and rule of avoidance of native residency.
  - With no independent functional or fiscal power base.
  - Provide officials with lifetime legal and fiscal privileges
- This is a ruler-dominated or centered system designed to mobilize resources fully to achieve dominance against external threat.
- The problem of inner (informal) circle of staffs versus the official bureaucracy

# Does an Absolute Ruler Face Constraints?

- Conditions of Self-enforcing constraints for the rule of benevolence:
  - Monopoly rule (elimination of external threat and competition), long time-horizon, long discount rate (with the throne heritable across generations).
  - Factors that strengthen the self-enforcing constraints:
    - The unchanging size of the Imperial household relative to a growing empire also led to low level extraction. Maximization of revenue (due to limited size of household) is secondary to retention of power.
    - Economies of scale in the provision of public goods in a large and growing empire.
- The insurrection constraint:
  - Domestic Rebellion
  - External Threat.
  - But it is an extremely noisy and costly signal.
- Informational Constraints against the grabbing hand of the rulers.
- The outcome: Possible a “virtuous” equilibrium of low taxation: imperial rule converted to a lord collecting fixed-rent.

# Outcomes: Main Features of the Mature System

- **Fixed Target for state revenue by the state**
- **De-facto private property rights:**
  - Gradual transformation of imperial ownership over land and labor to right of collecting cash payment of taxes; emergence of de-facto private property rights in land; rise of independent small-scale farming
  - The phenomenon of multiple land ownership.
- **The incentives of the state as a fixed-rent landowner:**
  - Fixed target of annual revenue converted Imperial rulers to fixed rent “landowners,” allowing the private sector (rather than the state) to capture the bulk of incremental production value.
- The state as the seeker and defender of monopoly rents.
- Conditions under which the above holds:
  - Complete monopoly of power within and without
  - Instability of rule and short-term horizon leads to extractions.

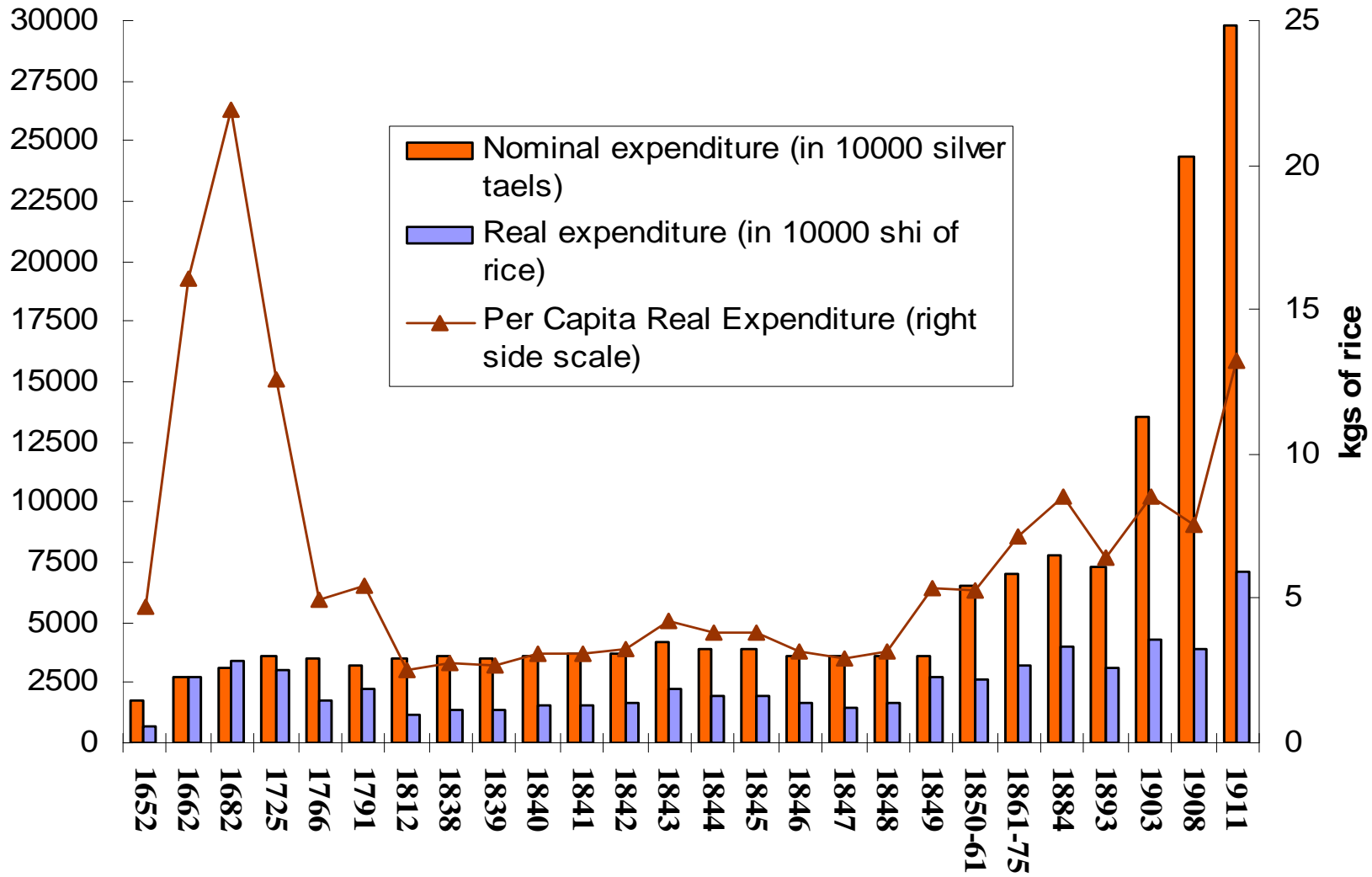
# Rents: access and distribution

- Rulers and bureaucrats as a rent-seeking coalition:
  - Bureaucrats have life-long status and privileges.
  - Law is hierarchical
  - Fixed revenue → fixed size of official bureaucracy.
  - Access to rents is controlled by the fixed quota of Civil Service Examination degrees.
- Rent dissipation: corruption is tolerated as long as it is not excessive.
- Huang Zhongxi paradox and the dilemma of Yongzhong fiscal reform.

## II. Is Qing the epitome of this model?

- Before the Qing: the Epitome of Roving Bandit Equilibrium: The Shun Interregnum of 1644.
- Chronology of Events in Qing:
  - 1644: Beginning of Qing rule
  - 1662: Complete suppression of the last Ming pretenders.
  - 1681: Defeat of Three Feudatories Revolt in Southern China.
  - 1683: Conquest of Taiwan and Maritime China.
  - 1689: Signing of the Treaty of Nerchinsk with Russia.
  - 1696: Conquest of Northwest Chinese territory.
  - 1720: Control of Tibet; installation of a new Dalai Lama.
  - Establishment of a tributary order in Korea, Vietnam, Burma and the closing of Japan in Tokugawa era.
- Early 18<sup>th</sup> century: Qing monopoly rule firmly in place following elimination of all viable rivals, the emperor acts to restrict his own (grabbing) hand:
  - 1712: Kangxi declaration: no new (land) taxes, ever.
  - 1722: Commutation of poll tax into part of the land tax.
  - Numerous tax exemptions.

## Government Expenditure (Revenue) in Qing China





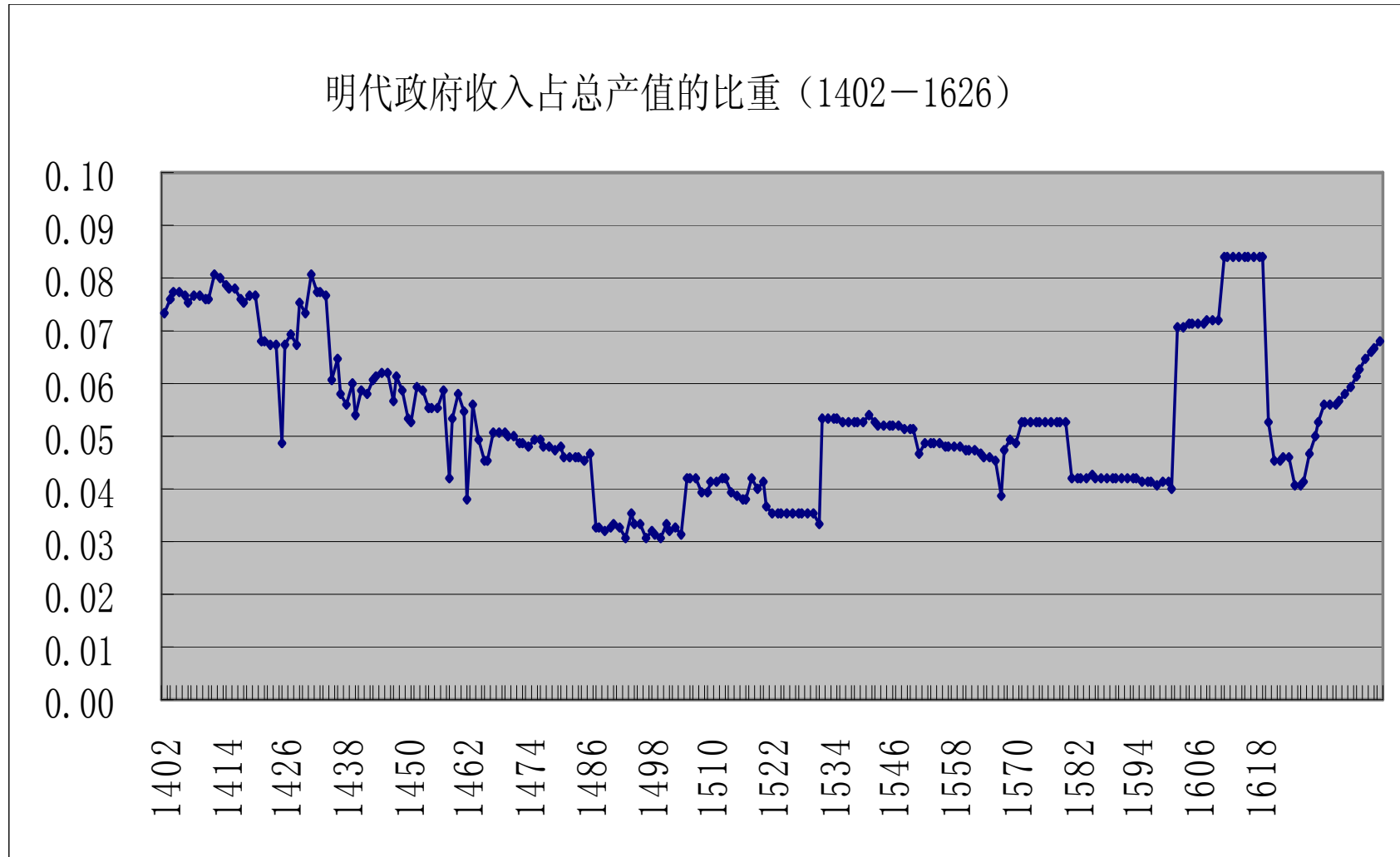
# Taxation and expenditure in Qing China

- Nominal Expenditure at the Imperial level largely remains flat until the mid-19<sup>th</sup> century effort to combat the Taiping Rebellion.
- Real expenditure (or taxation) declined throughout the 17-18<sup>th</sup> centuries , then stabilized until the mid-19<sup>th</sup> century.
- Real per capita expenditure or tax burden declined sharply from the late-17<sup>th</sup> century.
- Previous studies find that per capita Chinese taxation were remarkably modest, something like two or three days' earnings of an unskilled laborer.
- This seems consistent with Wang Yeh-chien's calculation that tax revenue only amounted to merely 2.4% of NNP in the 1910s (p. 133).
- This is also consistent with the low levels of govt consumption during the 1930s (3.6% in NDE, Liu and Yeh, p. 68, also T. Rawski

**From Liu Guanglin**  
**Tax revenues in China, 1085-1776**  
**(rice in *shi*)**

	Per capita land tax	Per capita indirect taxes	Total taxes	Per capita tax burden	Index (1085=100)
Song (1085)	0.26	0.54	72,102,000	0.8	100
Ming (1407)	0.54-0.76	0.02-0.03	47,657,000	0.56-0.79	70-98
Ming (1577)	0.21	0.03	42,185,000	0.24	30
Qing (1685)	0.18	0.04	38,044,444	0.24	30
Qing (1776)	0.09	0.03	36,620,000	0.12	15

# A Reflection on Ming Government Revenue as share of GDP (estimate by Guan and Li)



## Changes in the tax structure of China in the Qing period (in 1000 taels)

	1753		1908	
	Total	Percentage	Total	Percentage
Land tax		73.5		35.1
Ti-ting	37517	50.8	71413	24.5
grain (in kind)	16697	22.6	31004	10.6
Other taxes		26.5		64.9
Salt tax	8768	11.9	45000	15.4
Native Customs	5405	7.3	6700	2.3
Maritime Customs			32900	11.3
Likin			40000	13.7
Miscel. Taxes	5405	7.3	65000	22.3
Total (inclusive of surcharges)	73792	100	292017	100

# The Problem of Public Finance at the Local Level

- The center: the Board of Revenue. The local: county level collection. Also, the *Neiwufu*: a separate revenue dept. for the Imperial household
- Distinction between retained and remitted tax revenue. Formal revenue at local level generally limited to retained funds, which amounted to about 21.5% of total revenue in 1685.
- Provincial and county bureaucrats received meager salaries with no provision for hiring local staff or for other expenses.
- Therefore, local/provincial officials rely on informal revenue and join in networks of corruption.

### III. Striking contrast between China and Western Europe

- Tax revenue in England and Netherlands rose sharply in the 17-18<sup>th</sup> century. So did the per capita tax revenue.
- In Holland province, per capita tax burden rose from about 20% in the 17<sup>th</sup> century to about 50% by the late 18<sup>th</sup> century (De Vries and Der Woude, p. 97).
- In England, tax receipts as share of national income rose from less than 5% before the Glorious Revolution to more than 10% from the mid-18<sup>th</sup> century onward (O'Brien, 1988, p. 9).

## New Estimates by Ma, “Incentives and Information” (April 2010)

**Table 2. Qing Central Government Revenue in Comparison (Tons of Silver)**

	<b>China</b>	<b>Ottoman</b>	<b>Russia</b>	<b>France</b>	<b>Spain</b>	<b>England</b>	<b>Dutch Rp</b>	<b>Venice</b>
1650-99	940	248	68	851	243	239		78
1700-49	1304	294	155	932	312	632	310	84
1750-99	1229	263	492	1612	618	1370	350	91
1800-49	1367		1959			6156		

**Table 3. Comparison of per capita Tax burden (in grams)**

	<b>China</b>	<b>Ottoman</b>	<b>Russia</b>	<b>France</b>	<b>Spain</b>	<b>England</b>	<b>Dutch R</b>
1650-99	7.0	11.8	6.2	46.0	35.8	45.1	
1700-49	7.2	15.5	11.1	46.6	41.6	93.5	161.1
1750-99	4.2	12.9	22.1	66.4	63.1	158.4	170.7
1800-49	3.4		41.7			303.8	

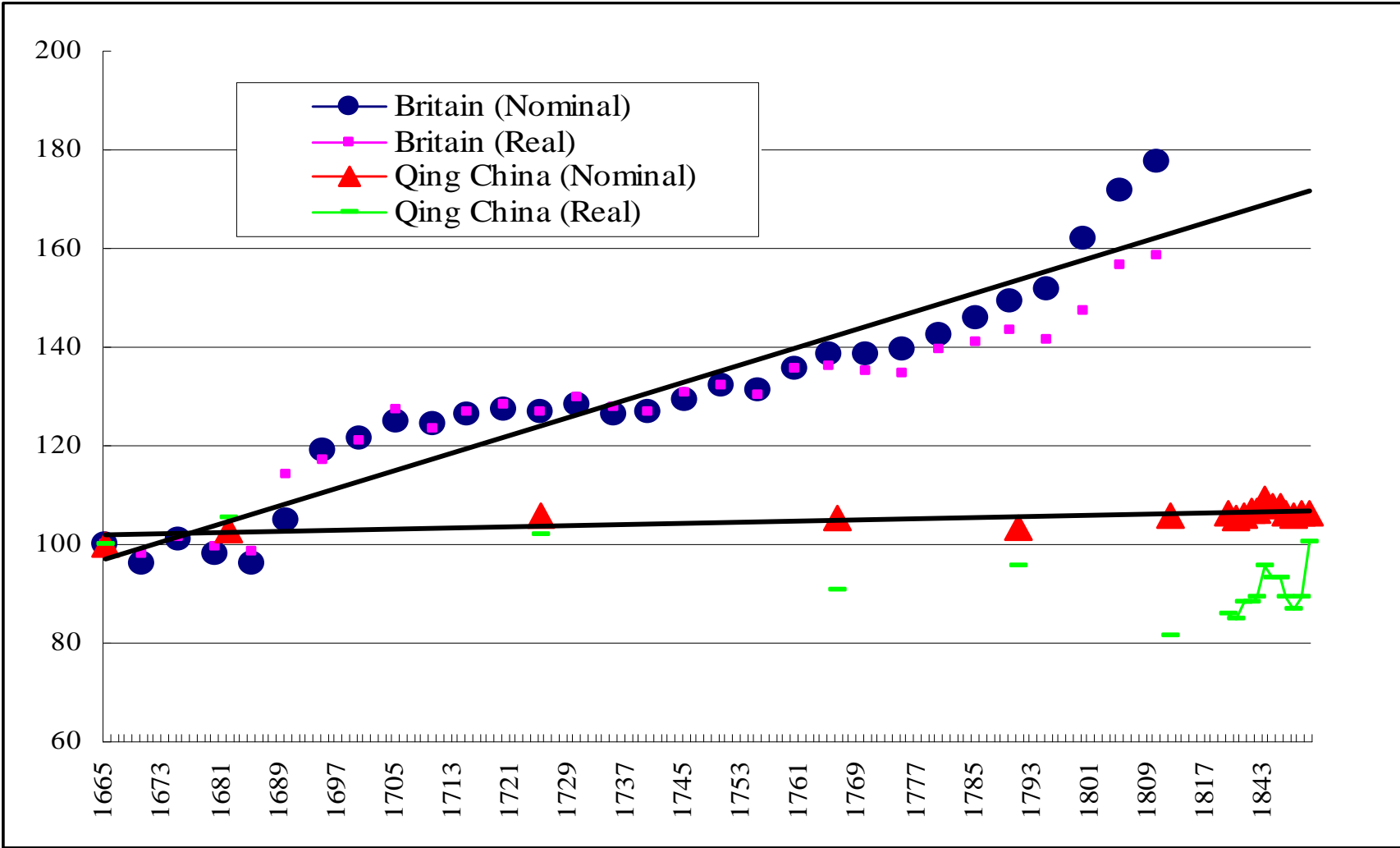
## Astonishing Contrast in Official Resources

When China confronted England in the infamous Opium War, its central government total revenue amounted to only 24% of tax receipts at the Exchequer of Britain and in per capita terms was a shocking 1% of the British level.

Debin Ma, "Incentives and Information...." (April 2010, p. 15)



**Figure 3. The Great Divergence: Nominal and Real Indices of Central Government Fiscal Revenue in China and Britain in Natural Logs (1665 = 100)**



## State-formation in Western Europe

- Variety of state institutions: royal kingdoms, feudal fiefdoms, city republics, city-leagues and the Church.
- decentralized autonomous political units.
- The existence of voice:
  - representative bodies (parliaments of different forms)
  - or citizenships (the Netherlands: Prak and van Zanden)
  - Representation or corporate bodies
  - Both the small scale of these political units and the institution of some form of representation (usually of wealthy elites) helped alleviate, if not resolve, the problems of principal-agent under asymmetric information.
- The possibility of exit: inter-state competition.
- A bottom-up political process responsive to the economic and commercial interests of the local elites, the driving force behind mercantilism, overseas expansion and to certain degree, the industrial revolution.
- Competitive rents through inter-state competition and Schumpeterian creative destruction

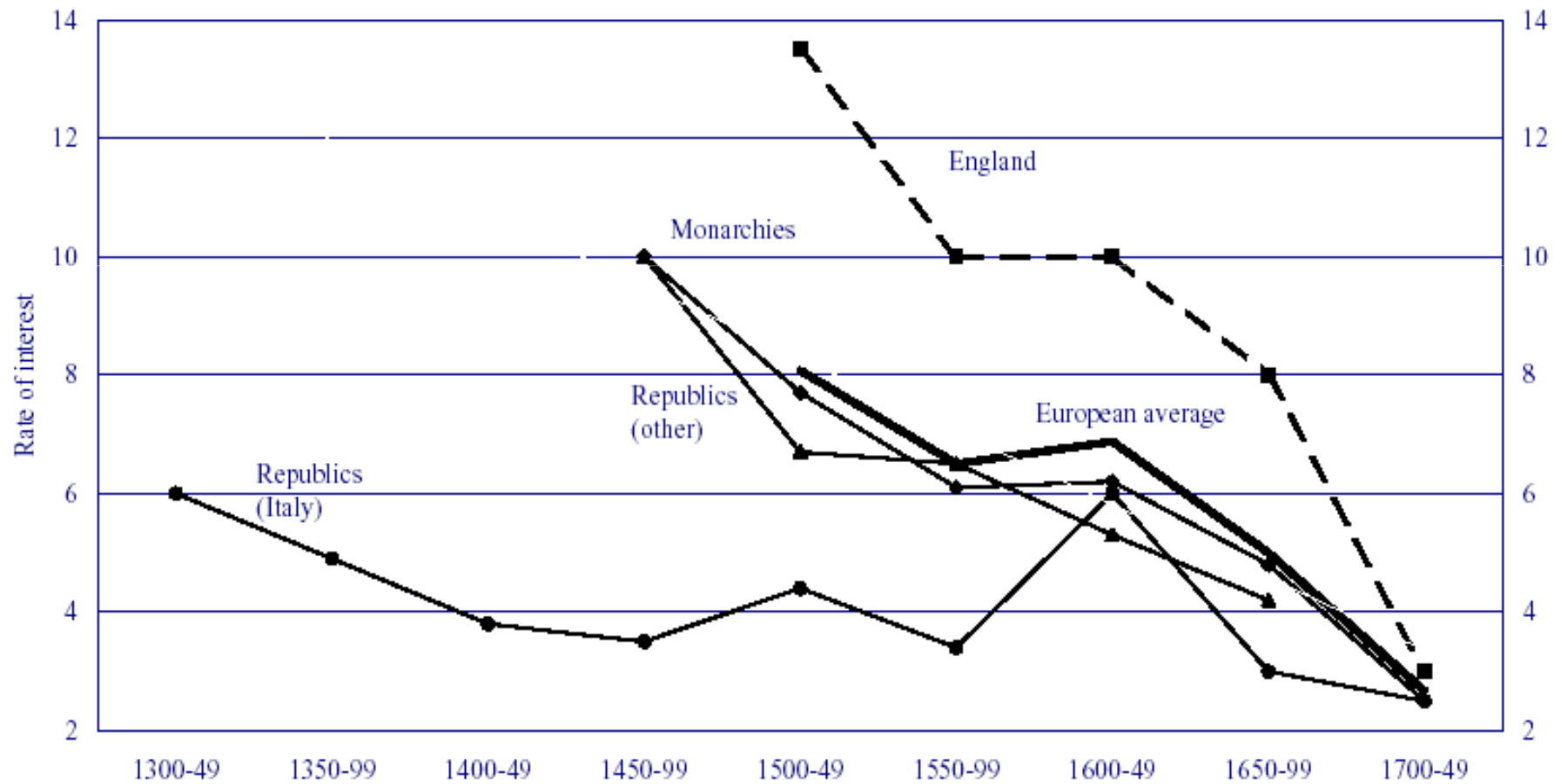
# The Rise of Modern England as a Fiscal State

- England as a relatively centralized state with territorially-based representative (House of Commons)
- Parliament as rent-seekers. But the rise of a national parliament in England (esp. post Glorious Revolution) centralized the process of “rent-seeking” and corruption. The rise of National Interest.
- Parliament evolved as the node of information and coordinator of collective action.
- The rise of a Weberian type of modern, professional, transparent and relatively corruption-free bureaucracy.
- State capacity to tax and generate steady and predictable flows of income also aided the development of financial markets.
- This is contrasted with tax-farming and venality (e.g. In Spain and France), which led to parcelization of property rights and weakened state capacity.
- **Rise of a “corporate” state vs. China’s family enterprise state.**

# Finally: Inter-Regime (not inter-state) Political Competition

Question: where would average Chinese interest rate be on this graph?

Figure 3: Long-term borrowing costs (nominal) of European states, by regime, 1300-1749



# Incentives in the Chinese State

- Fixed Target of Revenue cuts two ways:
- State becomes an absentee landlord rather than a residual claimant.
- With taxes fixed, the state no longer shares in economic expansion.
- The absence of stake-holder in the Chinese state:
- The state was “absent” where it faced no direct taxation interest or threat against its rule: commerce, industry, overseas exploration and so on.
- The so-called “developmental” policies or rule of benevolence are no more than fixed-rent landlords’ strategies for supporting tenants in times of distress:
  - Risk reduction
  - Famine relief (building public granaries)
  - Tax exemptions in times of bad harvests.

# Consequence of an “absent” and lethargic state

- State’s predominant interest is in the defense of (fixed) monopoly rents rather than revenue maximization.
- Government allocates resources toward social stability and elimination of potential competition.
- Insurrection is an extremely costly (for both rulers and the masses) way of power transfer, making monopoly of rule relatively attractive.
- But monopoly of rule eliminates comparative points of reference:
  - Inter-state perspective (in Europe) versus Cross-dynastic (inter-temporal) perspective (China).
  - Dynastic cycles versus creative destruction.

## Qing Foundations Not Controversial

- Emperors adopt long-term perspective
- Create stable, agrarian empire
- Emphasize Confucian ideology
- Throne rules through small bureaucracy
- Which enlists gentry cooperation & support
- And allows wide latitude for gentry to pursue their own economic interests

# Qing Outcomes

- Qing polity aimed to build a stable but expansive agrarian society with small govt
- And did so: big growth of GDP and population despite small, fixed government
- System adapted to some challenges: demography, food supply, water management, Taiping uprising
- But obstructed other responses to change



# Examples of Obstruction

- Most instances from late 19<sup>th</sup> century:
  - Silk in Canton (Ma); and Shanghai (S. Brown)
  - Cotton textiles (E. Motono, T. Suzuki, *Yomu undo*)
  - Bean oil processing (S. Brown)
  - Railways (S. Brown)
- Examples extend into the 20<sup>th</sup> century
  - e.g. Tianjin transport guilds prevent local merchants from using trucks to break long-standing guild monopolies (Hershtatter)
- What about the 18<sup>th</sup> century?
  - Does delayed development of Manchuria qualify (Y. Xue)
  - Other possible examples?

## Possible Importance of Unintended Consequences?

- **Emphasis on low taxes** left Qing ill-prepared to face threats from Taipings and from British
- But Qing mobilized local resources to defeat the Taipings
- **Question:** does **official support for gentry interest** have important unintended consequences?
  - If proposed innovation threatens gentry interest
  - Gentry may mobilize officials (and local citizens) in opposition
  - Officials, whose work necessitates gentry support, go along
  - I.e. gentry can invert what is intended as a 'top-down' system
  - And utilize a 'bottom-up' approach to obstruct innovation

## Can Our Political Economy Study Contribute?

- Our speculation: despite its strengths in supporting demographic & economic expansion and intensification of commerce, the Qing system of property rights contained structural features that **permitted** some innovations but **obstructed** others
- If so, **which exact features** are in play?
- We welcome suggestions on this matter!

# What is the Core of Reliable Quantitative Knowledge about China's Economy Before 1937?

- Population: long-term growth around 0.3-0.4 % per year
- Food supply: Perkins assumption of no major trend seems valid before 1750/1800
- Material welfare: closely linked to food supply
- Real wages: new data point to welfare decline from late 18<sup>th</sup> century – perhaps as early as 1740 – to about 1870; also welfare increase at very end of 19<sup>th</sup> century
- Early 20<sup>th</sup> century – mixed results
  - Real wages may have declined in 1900-10 decade (above)
  - Evidence of rising GDP and per capita income (T. Rawski)
  - Anthropometric data support this view (Piazza, Morgan)

## Core of Reliable Quantitative Knowledge: 2

- Qing grain price data (Y.C. Wang, Li, Shiue)
- Volume, value, direction, composition of intl trade
  - Good data after 1860
  - Data for 1750-1860 less detailed, less comprehensive
  - Considerable (no doubt incomplete) data on precious metals
- Gradually accumulating systematic data on
  - Non-grain prices
  - Nominal wages
  - Silver-copper exchange ratio
- Output of copper cash (minor currency for retail trade)
- Commodity output (20<sup>th</sup> century only; many problems)

## Core of Reliable Quantitative Knowledge: 3

- Monetary Data – reasonable data from about 1910; thins out before 1900.
- Transportation – some data for early 20<sup>th</sup> century, thins out before 1900.

# Prospects for Expanding the Core of Reliable Quantitative Knowledge

- Mercantile records and account books
- Government archives (e.g. information on wages and costs in construction)
- Chinese & Japanese field research (early 20<sup>th</sup> century)
- Collections of contracts (Ye Xianen, M. Cohen)
- Records of China's trading partners
  - British and Dutch East India Companies
  - Japanese government and commercial records
  - Korean mercantile records (?)

# Topics for further study

- Political economy of imperial China
- Institutions and innovation in 19<sup>th</sup> century China
- Impact of trade on the Ming-Qing domestic economy
  - Degree of integration with overseas markets
  - Impact of silver flows on domestic economy
- Domestic supply of coal before 1900
- Property rights and traditional Chinese legal system:  
private versus public order institutions.
- Pre-1900 Evolution of Monetary & Financial Instruments
- Business organization



# Relevance for understanding contemporary China

- **Many similarities between past and present.**
- **How to explain post-Reform growth without fundamental political change?**
- **Starting with the Opium War, opening → diffusion of technology & institutions.**
- **Further: forced introduction of (potential) inter-state competition: from the West, then Japan, then the four tigers, changed rulers' incentive structure**
- **When monopoly rents faced external competition: economic growth became the new target.**
- **Now the state takes top-down action (opening, SEZ, FDI, private business) that permits the emergence of powerful new interest groups beyond the traditional CCP elites, and gradually allows these new groups to share power through CCP membership, representation on official bodies, and lobbying (even by foreign businesses) to influence policy decisions.**
- **This begins to resemble Acemoglu's story about the Atlantic economy**

# THE END

- This Subject is Huge
- Our review is far from complete
- We are uncertain about many matters
- So we **WELCOME SUGGESTIONS**