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## A Critical Survey of Recent Research in Chinese Economic History\*

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China is a resilient dinosaur. In contrast with so many other great empires in Eurasia – the Egyptian, Roman, Byzantine, Arabian, Ottoman and Tsarist-Soviet – China has the longest history. The Empire kept expanding until the mid-nineteenth century when it practically reached the physical limits for a predominantly agrarian economy. The size and wealth of the Chinese economy, the variety of its produce and the degree of commercialisation and urbanisation made China one of the most popular international trading destinations from Roman times.<sup>1</sup> With the rise of the opium trade in the early nineteenth century, however, the Chinese economy has been severely impoverished at least in relative terms. In response, since the 1870s, the Chinese sought to rescue their civilisation by adopting a wide range of foreign examples in social engineering for social experiments and reforms.<sup>2</sup> Nevertheless, China's per capita GDP is still very low despite its political influence in the world since the 1970s. It is justifiable to view China as a case of growth failure in the recent centuries.

The study of Chinese economic history has the same age as China's modern history itself. The field has been led and dominated by the West.<sup>3</sup> Scholarly attempts have been

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<sup>1</sup> To demonstrate China's disposable wealth in 1884, Japan invaded Korea and three provinces of North China and forced China to pay 200 million ounces of silver (7,460.3 tons) as war reparation. The amount has been estimated as a quarter of the Japanese total national income. This sum was used by the Japanese to balance their trade deficit as well as establish a gold standard. Contemporary Japanese scholars counted China's reparation as windfall of 'foreign capital'. See Minami, *The Economic Development of Japan*, pp. 12, 201.

<sup>2</sup> The Meiji Restoration was mirrored in China's 1870-95 'Westernisation Movement' and the 1898 'One-Hundred-Day Reform'. The 1789 French Revolution was copied in Dr. Sun Yat-sen's 1911 Revolution to end the monarchy. A Chinese version of the Bolshevik Revolution was witnessed in the Communist attempts under various leaders to reunite the country and cleanse society. The Stalinist ISI and command economy was transplanted in c. 1956–58 in order to industrialise without the pains of capitalism. The Yugoslavian-Bulgarian institutional reform was imported in 1978 to soften the economic crisis under communism. The Asian Tigers' EOI was followed since the mid-80s and reached its climax with China's bid for its WTO membership. The Malthusian birth control was carried out in the early 70s.

<sup>3</sup> This is not only because of the systematic, effective destruction of the Chinese academia under Maoism in the 50s throughout the 70s but also in terms of the analytical tools and methods in use, including Marxism, as well as the sheer volume of scholarly works. No doubt, Chinese studies has become a large enterprises in Japan. For example, there have been some 600 works on water control in China alone (see Elvin et al., *Japanese Studies on the History of*

made since the turn of this century to explain China's premodern success and its downfall after the Opium War. Two approaches can be identified: the 'Sinological approach' which refers to China only and the 'comparative method' which compares China with the West. The former tries to find out what achievements China managed to make and when and how it made them and the latter seeks to understand why premodern China was not industrialised.

## I

The findings of the 'Sinological approach' can be highlighted under five headings.<sup>4</sup> First, China seems to have enjoyed superiority in premodern Eurasia in science and technology,<sup>5</sup> agricultural productivities (labour, land and total factor),<sup>6</sup> and military power.<sup>7</sup> Various studies have indicated that the Chinese probably reached a premodern ceiling for development in all these areas.<sup>8</sup> For example, in terms of the number of inventions, the Chinese almost certainly held the world record on the eve of the European Renaissance with a long list including metallurgy, gunpowder, the compass, silk, porcelain, paper-making and paper currency, block printing, mechanical clocks, and examinations to recruit civil servants, to name but a few.

Second, by premodern standards China achieved a high degree of commercialisation and urbanisation. Favourable conditions for commerce, including the use of paper currency and the establishment of credit institutions, existed in China much earlier than in Europe: for example, capitalist elements were evident in China long before Christ.<sup>9</sup> Moreover, the construction and maintenance of nation-wide roads, the waterway arteries (known as the Grand Canals), the investment in large-scale water-control schemes, the circulation of minted currencies, the manipulation of grain prices, and the use of standardised weights and measures lowered transaction costs throughout the economy.<sup>10</sup> Furthermore, a remarkable degree of social mobility as well as internal migration provided citizens with some incentives to study and accumulate wealth.<sup>11</sup> The

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*Water Control in China, A Selected Bibliography*). However, since few such works have been translated into other languages, their influence has remained minimum beyond the Japanese border.

<sup>4</sup> Mokyr catalogued the Chinese technological superiority into as many as ten categories in his *The Lever of Riches*, pp. 209-18.

<sup>5</sup> Needham, *Science and Civilisation in China*; Temple, *The Genius of China*; Merson, *Roads to Xanadu*.

<sup>6</sup> Ho, 'Aspects of Social Mobility'; Perkins, *Agricultural Development*; Rawski, *Agricultural Change*: chs 3, 6; Elvin, *The Pattern*; Hsu, *Han Agriculture*; Bray, 'Agriculture'; Huang, *The Peasant Economy*; Smith, 'Commerce, Agriculture and Core Formation'; Deng, *Development versus Stagnation*.

<sup>7</sup> McNeill, *The Pursuit of Power*, ch. 2; Levathes, *When China Ruled the Seas*.

<sup>8</sup> Typically see Elvin, *The Pattern of the Chinese Past*.

<sup>9</sup> *The Pattern*, chs 11-12; Jones, *Growth Recurring*, p. 74.

<sup>10</sup> *The Pattern*.

<sup>11</sup> Ho, 'Aspects of Social Mobility'; Ho, *The Ladder of Success*; Eberhard, *Social Mobility*; Hartwell, 'Patterns of Settlement'; Deng, *Chinese Maritime Activities*, chs 4-5.

non-agricultural population, which accounted for some 20 per cent of China's total, formed the cornerstone of the domestic market for cash crops, especially foodstuffs, textiles and tea. Apart from professional merchants and despite the fact that commerce was more concentrated in some favoured regions of the Empire,<sup>12</sup> the main feature of China's commercialisation was 'entrepreneurialisation of the peasantry': an ordinary peasant participated regularly and actively in the market by trading a considerable percentage of his output.<sup>13</sup> According to Perkins and Feuerwerker, from the Ming (1368–1644) to the early twentieth century as much as 20–40 per cent of China's agricultural output was marketed, or one-sixth to one-third of China's total GDP.<sup>14</sup> Even in relatively poor North China, 25–40 per cent of rural households earned their income from non-farming activities.<sup>15</sup> In terms of the scale and scope of the market, in Skinner's account, China's multi-regional, multi-layered trading network consisted of as many as 45,000 market towns, each of which affected on average 15–20 villages.<sup>16</sup>

Based on a stable surplus of food produced by the agricultural sector and the seasonality of farming, China had fully-fledged, rurally-based proto-industrialisation which paralleled that of Europe until the nineteenth century.<sup>17</sup> By Song times, the total annual iron output, for example, was estimated as 150,000 tons.<sup>18</sup> Under the Song, large quantities of heavy iron coins were minted for circulation. The fact that they were so heavy means that these coins were used as ingots not currency tokens. Thus iron must have been regarded as monetary metal with great value. In light of this, this output says more about the economy. During the heyday of the porcelain trade in the seventeenth century, exports of Chinese ceramics alone could easily have reached a level of one million pieces a year.<sup>19</sup> As late as 1800, China accounted for roughly a third of the total world manufacturing output and was still ahead of the West. By about 1830 the shares were comparable.<sup>20</sup> Household spinning and weaving in rural regions were already important before the Ming Period (1368–1644). Afterwards, the trend moved towards full-time by-employment.<sup>21</sup> In parts of China, 'tilling by the male and weaving by the female' implied that as the norm at least one adult in a rural household was engaged in

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<sup>12</sup> Rawski, *Agricultural Change*.

<sup>13</sup> Latourette, *The Chinese*, p. 575; Skinner, 'Chinese Peasants', pp. 272-3; Gates, *China's Motor*.

<sup>14</sup> Perkins, *Agricultural Development*, p. 115; Feuerwerker, *State and Society*, p. 86.

<sup>15</sup> See Skinner, 'Marketing and Social Structure', 'Chinese Peasants', and *The City*; Myers, *The Chinese Peasant Economy*, pp. 12-13.

<sup>16</sup> Skinner, 'Chinese Peasants', pp. 272-3; see also Skinner, 'Marketing and Social Structure'.

<sup>17</sup> Chao, *Man and Land*, pp. 24-5; Wong, *China Transformed*, chs 2-3.

<sup>18</sup> Harrison, *The Chinese Empire*, p. 290; cf. Elvin *The Pattern*, p. 85, Hartwell, *Iron and Early Industrialism*, 'Markets, Technology, and the Structure of Enterprise', and 'A Cycle of Economic Change'.

<sup>19</sup> Deng, *Maritime Sector, Institutions and Sea Power of Premodern China*, Ch. 1, Section 1.

<sup>20</sup> Huntington, *The Clash of Civilisations*, p. 86; also Kennedy, *Great Powers*, p. 149.

<sup>21</sup> Fairbank, *The Cambridge History of China*, vol. 11, pp. 17-18, 21.

non-farming production all the year round. Household industry retained a competitive edge over factory production until the first quarter of the twentieth century.<sup>22</sup> This division of labour and the pervasive by-employments supported the trade network that was manned by professional merchants to move goods over long distances across the Empire, a phenomenon which has been described as 'petty production at the household level and great circulation of commodities in the economy'.<sup>23</sup>

The undertakings of the non-food cash crops were on such a scale that during the period between 1750 and 1875, South China was the main supplier of tea, together with silk, to the rest of the world.<sup>24</sup> The Empire traded with the outside world not just as a diplomatic gesture but out of necessity. For example, China depended on imported war horses for the army and imported materials for medicine and monetary metals. Although foreign trade was often subject to state monopoly, bans on private trading represented only short episodes in China's long-term history.<sup>25</sup> In terms of exports, China supplied industrial goods such as lacquerware, ceramics, textiles, metal products (made of iron, lead, copper/bronze, silver and gold), non-metal handicrafts, stationery and books to Asia and, sometimes, beyond.<sup>26</sup> Not until the early nineteenth century had China been downgraded to the status of a primary exporter.<sup>27</sup> Still, in late Qing, the ratio of domestic to international trade was 2.3–3.1:1 in volume which reflects the importance of foreign trade in the economy.<sup>28</sup> To depict the Chinese government as protecting farming and tolerating trade and to represent the traditional Chinese economy as an 'agrarian commercial economy' are both well justified.<sup>29</sup>

Third, China protected and nurtured producers' incentives with reasonably well-defined property rights.<sup>30</sup> Thus, Tawney described the typical figure in Chinese country life not as the hired labour, but the landholding peasant. Similarly, Rawski maintains that 'for at least the last millennium, Chinese agriculture has been dominated by a large number of free, small-scale farmers, working under a system of private land-

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<sup>22</sup> Li, 'Husband and Wife Tilling Together'; see also Huang, *The Peasant Family*, pp. 44-57; Huang, *The Peasant Economy*; Chao, *The Development of Cotton Textile Production*, pp. 174-80.

<sup>23</sup> Zhang, 'Petty Production'.

<sup>24</sup> During the Qing Period when tea and silk formed at least 90 per cent of the total value of the Chinese exports to Britain. For more information see Deng, *Chinese Maritime Activities*, ch. 5.

<sup>25</sup> Morse, *The Chronicles*; Hall, 'Notes on the Early Ch'ing'; Boxer, *South China*; Wang, 'The Nanhai Trade'; Hirth and Rockhill, *Chau Ju-Kuo*; Rossabi, 'The Tea and Horse Trade'; Le Corbeiller, *China Trade Porcelain*; Jörg, *Porcelain*; Chang, *Chinese Maritime Trade*; Ng, *Trade and Society*; May and Fairbank, *America's China Trade*; Tampoe, *Maritime Trade*; Cushman, *Fields from the Sea*; Fan, *Long Distance Trade*; Manguin, 'Trading Ships'; Gardella, *Harvesting Mountains*; Deng, *Chinese Maritime Activities*, chs 4-5; Deng, 'The Foreign Staple Trade'; also see Greenberg, *British Trade*; Iwao, 'Japanese Foreign Trade'; Furber, *Rival Empires*; Chaudhuri, *The Trading World*; Chaudhuri, *Trade and Civilisation*.

<sup>26</sup> Deng, 'The Foreign Staple Trade'.

<sup>27</sup> Deng, *Chinese Maritime Activities*, ch. 5.

<sup>28</sup> Rawski, *Economic Growth*, p. 193.

<sup>29</sup> Wong, *China Transformed*, p. 138.

<sup>30</sup> Deng, *The Premodern Chinese Economy*, chs 2-3.

ownership'.<sup>31</sup> This pattern of landholding remained dominant until the inter-war period.<sup>32</sup> Internally, the widespread system of 'village-based responsibility for criminal offences' and 'neighbourhood watch' systems safeguarded law and order upon which the property rights and their enforcement heavily depended.<sup>33</sup> To guard its resources and investments, China had built by the third century BC an effective defence line marked by the Great Walls against looting and killing by nomads and was the only 'walled empire' in world history.

Even with peace, internal law and order, to maintain such a landholding peasantry over the long run was a major institutional achievement, given that landed property is an ideal commodity for business speculation and that China had an active market in land. In addition, the Chinese practised partible inheritance which split family property by the generation. Most of time, China managed to keep a balance, avoiding the concentration of property ownership, as the Imperial state maintained reliable communications for gathering information about disasters and fluctuations in food prices; held disposable resources like cash loans and food storage initiatives to provide the peasantry with relief so that individual households rarely lost all their property. The land-saving technology and high yields of Chinese agriculture softened the shortage of land.

The ideology of physiocracy ('agricultural fundamentalism') shared among the Confucian meritocrats also helped check excessive rent-seeking by the state, although local hiccups of corruption and occasional derailment of the state apparatus occurred from time to time.<sup>34</sup> This physiocratic policy pushed the expansion of the empire in all directions including off-shore Taiwan. Such territorial expansion was the ultimate solution for land shortages. Until Tsarist Russia conquered during the second half of the nineteenth century parts of Siberia and Turkestan that had been controlled by the Qing,<sup>35</sup> the Empire possessed a territory well over 10 million square kilometres compared with 1.6 million square kilometres under the Shang (c. 1520–1030).<sup>36</sup>

Fourth, some long-term patterns of China's premodern growth have been established. This was pioneered by Elvin in his *The Pattern of the Chinese Past* (1973). The effort continued by Skinner in his 'The Structure of Chinese History' (1985). Both studies recognise regional shifts in the centre of economic gravity and changes in technology, productivity, demography, institutions and economic structures. Both

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<sup>31</sup> Tawney, *Life and Labour*, p. 34; Rawski, *Agricultural Change*, p. 3; cf. Elvin, *Pattern*, ch. 15.

<sup>32</sup> Fei, *Peasant Life*; Buck, *Land Utilization*.

<sup>33</sup> Waverick, *China: A Model*.

<sup>34</sup> Deng, *Development versus Stagnation*, ch. 2.

<sup>35</sup> CBW, *Encyclopaedia* (1989), p. 1596.

<sup>36</sup> Song, *Regional Cultures*, p. 201.

studies identify the Song Period (960–1279) as the premodern peak, after which no significant progress took place. Elvin refers to this situation as a 'high-level equilibrium trap'; and Skinner, 'regional cycles'.<sup>37</sup>

Last but not least, although scholars have generally agreed that China's population experienced a rapid rise after the seventeenth century,<sup>38</sup> some studies have suggested that average standards of living in the advanced southeast region (roughly Jiangsu, Zhejiang, Hunan and Guangdong) matched standards in Western Europe during the eighteenth century,<sup>39</sup> an observation which is well supported by *a fortiori* evidence from travelogues of European visitors.<sup>40</sup> And, China's education and popular literacy level remained also high.<sup>41</sup>

## II

The credibility of those findings is subject to debate. Although the information of China's socio-economic conditions over three millennia is extensive, it is incomplete. Guesstimation is inevitable and contradictory conclusions are not uncommon.<sup>42</sup> In terms of methodology, there have been two main problems for the Sinological approach. First, what was the relationship between regions and the empire as a whole? Second, where did ecological and political forces enter long-term economic history?

To deal with an empire like China with multiple regions with different climatic, hydraulic, topographical and soil conditions, sub-cultural groups and behavioural patterns, studies of short and medium-term developments of regions not only make sense but are also easily manageable. Since the late 1950s, there has been a clear trend towards studies into local and time constrained economic history although the groundwork was laid much earlier in the 1930s in Chi's work *Key Economic Areas in Chinese History* (1936). Numerous works followed his example including Wang's 'The Nanhai Trade' (1958), Hartwell's *Iron and Early Industrialism in Eleventh-Century China* (1963) and 'A Cycle of Economic Change in Imperial China: Coal and Iron in

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<sup>37</sup> Elvin, *The Pattern*, p. 313; Skinner, 'The Structure of Chinese History', p. 270.

<sup>38</sup> Numerous works, for example Ho, *Population of China*; Perkins, *Agricultural Development in China*, pp. 192–216; Fei and Liu 'Population Dynamics of Agrarianism in Traditional China'; and Lee 'Food Supply and Population Growth in Southwest China, 1250–1850'. A good summary is offered by Maddison in his *Chinese Economic Performance in the Long Run*, 'Appendix D'.

<sup>39</sup> Pomeranz, 'Rethinking Eighteenth-Century China'; Pomeranz, *Economy, Ecology, Comparisons and Connections*; Wong, *China Transformed*, pp. 27–8; see also Bairoch, *Economics and World History*, p. 95; for more conservative estimate see O'Brien, 'Intercontinental Trade', pp. 85–6.

<sup>40</sup> See for example Barrow, *Travels in China*, p. 527; Ellis, *Late Embassy to China*, vol. 2, pp. 128–9; Bairoch, *Economics and World History*, pp. 106–8.

<sup>41</sup> Rawski, *Education and Popular Literacy*; Deng, *Development versus Stagnation*, chs 2, 7.

<sup>42</sup> Fairbank, *Chinese Thought and Institutions*, *The United States and China*, *The Cambridge History of China*; Wittfogel, *Oriental Despotism*; Balazs, *Chinese Civilization*; Qian, *The Great Inertia*; Skinner, 'Marketing and Social Structure'; Elvin, *The Pattern*; Tang, 'China's Agricultural Legacy'; Deng, *Chinese Maritime Activities*, ch. 4. See also Chao, *Man and Land*, ch. 1; Mokyr, *The Lever of Riches*, ch. 9.

Northwest China, 750–1350' (1967), Twitchett's 'Merchant, Trade and Government in Late T'ang' (1968), Ho's 'The Loess and the Origin of Chinese Agriculture' (1969), Myers's *The Chinese Peasant Economy: Agricultural Development in Hopei and Shantung, 1890–1949* (1970), Shiba's *Commerce and Society in Sung China* (1970), Rawski's *Agricultural Change and Peasant Economy of South China* (1972), Wang's *Land Taxation in Imperial China, 1750–1911* (1973), Skinner's *The City in Late Imperial China* (1977), Hsu's *Han Agriculture* (1980), Huang's *The Peasant Economy and Social Change in North China* (1985) and *The Peasant Family and Rural Development in the Yangzi Delta, 1350–1988* (1990), Marks's 'Rice Prices, Food Supply, and Market Structure in Eighteenth-Century South China' (1991), Rawski and Li's *Chinese History in Economic Perspective* (1992), just to name a few.

Regional studies over the short/medium-run have contributed greatly to the understanding of the mechanisms of Chinese development. Yet, they often overlook a basic structural factor namely that most of the time and in main part of China had a nation-wide market, a single government (which was active in maintaining food supply, famine relief and price control), a standardised written language, a uniform system of calendar, weights and measures, a dominant Confucian code of conduct, a network of nation-wide transportation and the mechanisms for social mobility and inter-regional migration. Together, they were able to iron out, to some considerable degree, regional differences. Thus, these differences may be less significant than some scholars suppose.

In contrast to a strong growth in regional studies, long-term and empire-wide studies are becoming an 'endangered species', although these two approaches are largely complementary and Chinese economic history needs both. One reason is the information and knowledge constraint that any individual faces. For example, *The Official Histories of the Twenty-Five Dynasties* contains over 33 million words in classical Chinese.<sup>43</sup> It takes at least ten years' linguistic and historical training for a student to be able to understand the material. In addition, long-term and empire-wide studies of the 'broad brush' fashion are notoriously inclined to overgeneralisation, which easily attracts criticism. All these make long-term and empire-wide studies a risky business. Nevertheless, some heuristic attempts have been made in Lee's *The Economic History of China* (1969), Elvin's *The Pattern of the Chinese Past* (1973), Bray's volume on agriculture in *Science and Civilisation in China* (1984), Chao's *Man and Land in Chinese History* (1986), and more recently, Wong's *China Transformed* (1997).

Turning to the second problem, we know that the main difference between economics and economic history is that economics makes certain *parti pris* assumptions about the environment and the political framework for economic activity. But

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<sup>43</sup> S and S, *The Official Histories*.



throughout history China was not only invaded many times by nomadic peoples from outside its borders but was also turned upside down many more times by its own citizens, mainly the peasants: in all there were 1,109 main military conflicts between the Chinese and the northern nomads from 215 BC to AD 1684<sup>44</sup> and as many as 225,887 recorded armed rebellions between 210 BC and AD 1900.<sup>45</sup> The impacts of these conflicts and rebellions were not trivial in terms of both accounting costs and opportunity costs as huge numbers of people and animals were killed, vast areas of cultivated land abandoned, and farming equipment and facilities destroyed. Severe natural disasters such as the periodic flooding of the Yellow River had similar effects. To ignore disasters in dealing with China's economic past can thus be very misleading. Although periodic outbreaks of political turmoil are now recognised by all sinologists,<sup>46</sup> it was not until the early 1980s that the disaster as a major factor in long-term economic history was systematically explored by Jones who sees the Mongol invasion of Song China during the thirteenth century as the turning point for an economic downfall for the Chinese.<sup>47</sup> For a more recent period, Rawski gave heavy weight to the economy-wide damages caused by the invading Japanese in the period of 1937–1945.<sup>48</sup>

### III

Compared to the the Sinological approach, the 'comparative approach' is more complicated and controversial. The main debate in the field of premodern Chinese economic history focusses on the key question of why China failed to advance further from its outstanding achievements under the Song. The implicit benchmark for such comparison is Western European economic growth since the Renaissance, especially the British Industrial Revolution. Jones's well-known phrase that China reached within a hair's breadth of industrialising in the fourteenth century sums up the problem.<sup>49</sup> Needham also asked the same question when he enquired into why the Chinese never passed the threshold required to develop controlled scientific experimentation of the post-Renaissance type.

With very different clusters of endowments, very different price structures for factors of production and equally different institutions, China and Western Europe were almost different 'Darwinian species' and comparison is problematic, because in the end

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<sup>44</sup> Fu Z. *et al.*, *A Military History*.

<sup>45</sup> Li *et al.*, *Peasant Rebellions*; Fan, *Chinese History*; Liu *et al.*, *Pre-modern China*; CBW, *Encyclopaedia* (1979), pp. 4766-816; Zhang and Zheng, *Struggle of the Chinese Peasantry*.

<sup>46</sup> See for example Fairbank's 'dynastic cycle' in his *The United States and China*, ch. 5.

<sup>47</sup> Jones's keeps nothing as a constant. See his *The European Miracle* and 'The Real Question about China: Why Was the Song Economic Achievement Not Repeated?'

<sup>48</sup> Rawski, *Economic Growth*.

<sup>49</sup> Jones, *The European Miracle*, p. 160.

the question inevitably becomes why China was not another Western Europe.<sup>50</sup> Philosophically, although the growth in Western Europe was real and thus 'Darwinian positive', the use of the European experience as a gauge to measure China can be 'Hegelian normative' due to its built-in 'counterfactualism'. This acultural and non-endowment approach is deeply rooted in European beliefs, such as Marxism, in a unilinear and unipotent developmental path.<sup>51</sup> It is worth noting that the fantasy of unilinear development violates Marx's own 'historical materialism' which is Darwinian in nature.<sup>52</sup>

A recent work by Wong viewing China as a distinct system of economic functions/mechanisms marks an important step toward the Darwinian end,<sup>53</sup> although one also needs to be careful not to glorify 'Darwinian longevity' simply because survival is not even a necessary criterion of growth and development. In the long run, as Keynes has told us, we are all dead.

Alternatively, one could compare different economic performances during different historical periods to see trends within the same civilisation – an approach pioneered by Jones who asks why the Chinese did not repeat their Song achievements.<sup>54</sup> Although he departs from a simplistic acultural and non-endowment comparison, the approach posits socio-economic hegemony under the Song and socio-economic inferiority after. Hegelism will always be with us.

Yet, no matter how conscious economic historians are of the differences between China and the West, the convertibility of Chinese economic performance to indices of Western European performance has made comparisons attractive (with a long list including per capita outputs and incomes, man-to-land ratios, crop yields, population densities, degrees of commercialisation/urbanisation, and standards of living measured by calorie intakes).<sup>55</sup>

The development of acultural and non-endowment comparison approaches probably also has something to do with the constraints of knowledge about the world. Thus, some visible/tangible, universal yardsticks are needed to measure the technological and economic status. It is easy to measure superiority by rank in a

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<sup>50</sup> Wong, *China Transformed*, pt. 1.

<sup>51</sup> Hegel, *Philosophy of World History*; Marx, 'Manifesto of the Communist Party'; Rostow, *The Stages of Economic Growth*.

<sup>52</sup> See Darwin, *On the Origin of the Species*.

<sup>53</sup> Marx claims that ultimately the 'force of production' determines 'relations of production' and thus determines the developmental path. His 'force of production' is clearly 'shaped' by the relationship between nature and man. If societies live in dissimilar physical environments with different endowments, price structures and institutions, how can they be destined in the same end and in the same way? In other words, how can fatalistic Hegelism (which ranks superiority with developmental paths) and naturalistic Darwinism (which rejects a unilinear path and allowed for mutation and extinction and defines superiority as survival) ever be combined?

<sup>54</sup> Jones, 'The Real Question'.

<sup>55</sup> A recent attempt was Maddison's *Chinese Economic Performance in the Long Run*.

technical, economic and military pecking order. Thus, to some extent, the *raison d'être* for the use of Western Europe as a benchmark is justifiable. This European benchmark will, *pace* Darwin, remain as a second best solution regardless of opposition from both the camp of the 'reference' (Western Europe) and the 'comparée' (China).

#### IV

Once post-Renaissance Europe is used as the benchmark for comparison, China's past presents a huge paradox. Given all the aforementioned achievements, China seems to have possessed nearly all the important ingredients for further development and at times even displayed major characteristics for an incipient industrial revolution.<sup>56</sup> China seems to have been a genuine candidate for the first industrialised society but never got there. The Hegelian development broke down.<sup>57</sup> So much so that China has been labelled 'exceptional' and 'counterfactual'.<sup>58</sup>

However, from a Darwinian perspective, a linear development is not only optional and probably random but also relative.<sup>59</sup> China is indeed factual and anti-theoretical instead. Whether the economy was ever truly a candidate for the first industrialised society becomes irrelevant.<sup>60</sup> China seems much less puzzling. Sinologists tend to favour this Darwinian vision, viewing China as a world of its own. This is often labelled China's uniqueness. Nevertheless, to explain China's failure to develop along European lines has been mainstream historical practice. There are numerous comparative works which have contributed to our understanding of premodern Chinese economic performance.

Nine schools can be singled out in this survey: ideological determinism, market model, environmental determinism, class-struggle hypothesis, population models, technological determinism, rent-seeking government and exploitative landlordism hypothesis and role of the state.

*Ideological determinism* owed much to Hegel who believed that socio-economic development is determined by spirit. Such spirit can be interpreted as religions, ideologies and ideas. Since religions, ideologies and ideas are not difficult to identify and they are often more or less unique to different civilisations or 'cultures', everything

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<sup>56</sup> Elvin, *The Pattern*.

<sup>57</sup> See, for example, Lin, 'The Needham Puzzle'.

<sup>58</sup> See Elvin, 'China as a Counterfactual'.

<sup>59</sup> I reject the application of Darwinism the way 'social Darwinism' presents, especially in terms of competition for resources with non-peaceful means and pursuit of political, military and economic hegemony. Rather, I limit my application of Darwin's idea to a process of evolution with a set of specific economic conditions. Thus, I would rather call my approach 'socio-economic evolution' instead of 'social Darwinism'.

<sup>60</sup> See for example Wong, *China Transformed*, pp. 101, 111.

can be attributed to them.<sup>61</sup> For ideological determinists, a conclusive answer to China's puzzle can thus be given. For example, Weber represented the Chinese mindset as the main reason for China's lack of indigenous capitalist growth.<sup>62</sup> Fairbank in his *Chinese Thought and Institutions* (1957) and Qian in his *The Great Inertia* (1985) further pointed to 'deficiencies' in Chinese ideology and cultural values, deficiencies that froze Chinese creativity, misled talent, wasted energy and led the economy into backwardness. Needham, the doyen in the study of Chinese premodern science and technology, is among those who agree with such views.<sup>63</sup>

Although such studies promote cultural understanding, the approach has the flavour of fatalism and associates development with pre-programmed choices that have been made for later generations long before they are born. More seriously, it is known that in history peoples who shared similar cultures or beliefs had very different economic developmental paths. In Asia, one can ask why the Confucianised (or partly Confucianised) Japanese succeeded in adapting Western industrialisation while the Chinese who had patented Confucianism did not; nor until after WWII did the other Confucian peoples (such as the Koreans and Vietnamese). Similarly, the adoption from Europe of a 'modern' ideology (Marxism-Leninism) after 1949 did not help much in mainland China's economic growth, whereas during the same period the Confucian values supported rapid growth in 'Asian Tigers'. There can be little doubt that ideology and cultural values do not provide sufficient conditions for the explanation of growth or retardation.

The entrepreneurial spirit is often attached to this school of thought, and China's problem is often attributed to a lack of entrepreneurship.<sup>64</sup> But this suggestion is incompatible with the volume and range of Chinese inventions and innovations in premodern times or with the scale, scope and profitability of Chinese commercial activities.<sup>65</sup>

*Market model.* A great many scholars regard the market as a locomotive for economic growth. Hicks elaborated this idea.<sup>66</sup> According to Hicks, Europe enjoyed favourable conditions for the diffusion of markets, including the rise of an agricultural surplus, specialisation, professional traders, the establishment and maintenance of law

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<sup>61</sup> Weber, *The Protestant Ethic*; see also Tawney, *Rise of Capitalism*. A renewed attempt was made by Landes's *The Wealth and Poverty of Nations*. When this bulky, narrative book is stripped off for the kernel, the author's argument is 'culture' and cultural determinism.

<sup>62</sup> *The Religion of China*, pp. 199-200.

<sup>63</sup> Needham, 'History of Scientific Thought', *The Grand Titration*, p. 115; see also Mokyr, *The Lever of Riches*, 227-9.

<sup>64</sup> Scherer and Perlman, *Entrepreneurship*; see also Leff, 'Entrepreneurship and Economic Development'.

<sup>65</sup> Needham, *Science and Civilisation in China*; see also Deng, *Chinese Maritime Activities*, ch. 4.

<sup>66</sup> *A Theory of Economic History*, p. 7.

and order, money and credit, as well as mercantile policies.<sup>67</sup> Alas, Hicks ignored the fact that Europe was not so unique. These conditions also existed in China. As early as the sixth century BC private ownership and basic property rights emerged in China. China had a highly productive agricultural sector which yielded surplus. China was also considered by Europeans to be one of the most orderly and lawful societies on earth.<sup>68</sup> In terms of the market economy, China had a sophisticated monetary system and extensive domestic and international trading networks.<sup>69</sup> As Feuerwerker observed, 'from the Song onward, China's economy was essentially a market economy in which most of the economic results were determined by decisions made and actions taken in the private sector'.<sup>70</sup> A recent work by Kelly shows that Song China had an 'economywide market' without parallel elsewhere in the world until the eighteenth century.<sup>71</sup>

Perhaps Hicks's model is too romantic about the function of the market. Why these favourable conditions did not lead China anywhere near the achievements of Western Europe becomes far less puzzling if we go back to the basics of classical and neo-classical economics. Although a functioning market can optimise the allocation of resources, it does not automatically lead to sustained technological and economic development. Instead, the market may lead to a general equilibrium and thus a Ricardian 'stationary state'. Indeed, China looks merely like an economy with a high degree of commercialisation in a stationary state. So, the market model itself has a problem: it expects too much from the market.

*Environmental determinism.* Deep in Hicks's market model is the core of environmental determinism. This revealed unmistakably when he praised Europe's geographic advantages over Asia and consequently attributed growth to the mercy of nature.<sup>72</sup> Such a view is still influential.<sup>73</sup> But what is often overlooked is that there is an 'Asian Mediterranean' in the China seas.<sup>74</sup> In the past, different peoples met, migrated and traded there. Monsoon winds greatly helped shipping in the Asian Mediterranean and there is no reason to view Asia as geographically inferior to the Mediterranean on the other side of Eurasia.<sup>75</sup> Therefore, geographic difference no longer provides a safe haven for environmental determinism in studying China. Elvin's

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<sup>67</sup> *Ibid.*, pp. 23-6, 42, 68-71.

<sup>68</sup> Waverick, *China: A Model*; Elvin, *The Pattern*; Hsu, *Han Agriculture*; Bray, 'Agriculture'.

<sup>69</sup> See Skinner, 'Marketing and Social Structure'; Skinner, *The City*; Elvin, *The Pattern*.

<sup>70</sup> 'The State and the Economy', p. 304.

<sup>71</sup> 'Smithian Growth', pp. 952-62.

<sup>72</sup> See Hicks, *A Theory*, p. 38-9.

<sup>73</sup> See Diamond, 'Peeling the Chinese Onion'.

<sup>74</sup> Deng, *Chinese Maritime Activities*, chs 1-2.

<sup>75</sup> *Ibid.*, chs 2-3.

study of long-term environmental changes in China indicates that it was human economic activities that determined environment rather than the other way around.<sup>76</sup>

*Class-struggle hypothesis.* There are two inter-related aspects to this Marxist hypothesis. Firstly, a society constitutes rival classes with contrasting economic interests: slaves versus their masters, serfs versus feudal lords, and wage workers versus capitalists *etc.* Secondly, political and economic struggles among rival classes were the driving forces of socio-economic change.<sup>77</sup> But it is extremely doubtful whether a population can and should be divided into different interest groups in the way portrayed. It is even more questionable to view the tension among classes as the norm since half Eurasia was under Marx's own classless 'Asiatic Mode of Production' (AMP). Moreover, from Marx's own AMP paradigm, a classless society may well be the end of growth. Marx's communism turned out to be a Pandora's Box.

Fundamentally, slavery, feudalism and capitalism are not universal. They were largely absent in China where landholding peasants were much less divided by 'class' than in other parts of Eurasia.<sup>78</sup> At best, China had a 'gentry' stratum, partly rural and partly urban with possession of land and good Confucian education and an easy access to state power at the highest level.<sup>79</sup> Ordinary members of the gentry were involved in grass-roots administration.

Numerous works were done during the 1950s–60s, eg. Fei's *China's Gentry* (1953), Chang's *The Chinese Gentry* (1955), Marsh's *The Mandarins* (1961), Ho's *The Ladder of Success in Imperial China* (1962), and Eberhard's *Social Mobility in Traditional China* (1962). They revealed distinct differences between the Chinese gentry and the feudal landholding class in medieval Western Europe and Tokugawa Japan. The Chinese gentry's status was in principle non-inheritable and non-rigid. The average landholding of the members of the Chinese gentry was in real terms far smaller than that of the feudal upper class of medieval Western Europe and Tokugawa Japan.<sup>80</sup>

Even if the Chinese gentry is treated as a feudal class, the fact that the feudal landholding class in medieval Western Europe and Tokugawa Japan facilitated capitalism and the Chinese gentry did not presents a paradox. Treating the Chinese gentry as a feudal class, as many Marxist historians have done, is utterly misleading, representing a major step backward from Marx's AMP which at least admits classless

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<sup>76</sup> Elvin, 'Three Thousand Years of Unsustainable Growth'.

<sup>77</sup> Marx, 'Manifesto of the Communist Party'.

<sup>78</sup> See for example Fei, *Peasant Life*, pp. 191-4; Tawney, *Life and Labour*, p. 34-5, 38, 71; Buck, *Land Utilization*, pp. 194-7; Mousnier, *Peasant Uprisings*, pp. 237-41; Hsu, *Han Agriculture*, pp. 10-11, 13-14, 66-7; Chao, *Man and Land*, chs 7-8.

<sup>79</sup> Overall, the landholding of the gentry class was more or less that of the middle or upper-middle, well-to-do peasants. This was the pattern in the most advanced Jiangsu Province during the 1920s; see Li, 'Ten *Mu* per Farmer' and Buck, *Chinese Farm Economy*.

<sup>80</sup> Rawski, *Education and Popular Literacy*, p. 23; see also Chang, *The Chinese Gentry*.

features in Asia. It is worth noting that historians in mainland China have deeply divided into two camps in accordance with Marx's own contradicting views on the Eurasian world: the 'party scholars' are die-hard class-strugglers who stick to the 'Hegelian Marx' while the 'liberal scholars' are attracted by the 'Darwinian Marx' with the AMP as an alternative view on China's past.<sup>81</sup> As the liberal Darwinian Marx was proved politically incorrect in Mao's era, the debate on 'sprout of capitalism' based on the Hegelian Marx has gone to a fruitless dead-end.<sup>82</sup>

*Population models.* Those regard population growth as having a negative impact on socio-economic development are Malthusians whose model has been one of the most frequently used theories in explaining China's past.<sup>83</sup> Chao's recent monograph portrays over-population as the main source of Chinese economic backwardness.<sup>84</sup> But his work is based on four questionable assumptions. First, there existed no economic divergence in peasant households who produced almost the same things generation after generation. Second, there were few technological and/or structural changes, especially in the later period of the Empire. Third, the supply of land was inelastic. Fourth, there was no preventive check on population growth. Thus the decline in man-to-land ratio was taken as the sole indicator for economic deterioration in China.

Recent research suggests a different picture. China's rural economy was very divergent during the Ming–Qing Period when vigorous population increase occurred. In places like the Yangzi Delta surplus rural labour was absorbed almost completely by handicraft industries so that the actual land–labour ratio in farming changed little.<sup>85</sup> During the same period technological changes continued to stave off diminishing returns. For example, the vast interior region of the Yangzi–Han Plain, some 400,000 square kilometres, was redeveloped and transformed to a highly productive, remarkably commercialised and urbanised regional economy, known for its regular net export of large quantities of rice, raw silk/cotton and cloth. This development was underpinned by a new method of land utilisation and reclamation (known as 'diked paddies'), new crops and new market opportunities. The total annual grain output of the region was at least doubled between the Chenghua Reign (1465–87) and the Yongzheng Reign (1723–35) to 2.21 million metric tons. Of this output, 62 per cent was marketed.<sup>86</sup>

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<sup>81</sup> Brook, *The Asiatic Mode of Production in China*

<sup>82</sup> For this lasting debate see Sanlian, *Collected Papers on the Issue of Sprouts of Capitalism in China*; Yin, 'A Historical Research on the Sprouts of Capitalism in Chinese Agriculture'; Fang, 'Economic Structure of China's Medieval Society and the Sprout of Capitalism'; Li, 'On China's Landlord Economy and the Sprout of Capitalism in Agriculture'; Xu and Wu, *Sprouting of Capitalism in China*.

<sup>83</sup> Malthus, *An Essay on Population*.

<sup>84</sup> *Man and Land*.

<sup>85</sup> Li, 'Ten Mu per Farmer'; Li, 'Husband and Wife Tilling Together'.

<sup>86</sup> Zhang, 'Impact of Agricultural Development', p. 42.

During the same period, in Shandong of the northeast, a province with one of the poorest man-to-land ratios in China,<sup>87</sup> similar changes took place. The acreage under cultivation was doubled, and a multi-cropping system was adopted with a range of newly-introduced plant species. Consequently, despite a doubling population, Shandong maintained its position as a net exporter of salt, wheat, dry fruits, soy beans and groundnut products, raw cotton/silk and cloth, raw and processed tobacco, pottery and mats with an estimated aggregate value of 2,050–2,240 metric tons of silver a year.<sup>88</sup>

Evidence also shows that in some of the richest farming areas of Jiangsu Province, population control was practised, resulting in a growth rate of a mere 0.3 per cent a year.<sup>89</sup> Recent research has also indicated that the observed increase in food prices (often quoted as evidence for the alleged deterioration of the man-to-land ratio in Qing times) was in effect a symptom of a 'price revolution' caused by the importation of large quantities of silver over time, together with the impact of China's integration into the capitalist world economy.<sup>90</sup> After all, there was no empire-wide famine in Ming–Qing China.

Since two production factors – technology and land input – were both elastic, it is unlikely that any crisis of diminishing returns occurred in the advanced farming regions where rural 'over-employment' rather than 'under-employment' was the norm.<sup>91</sup> Therefore, the Malthusian man-to-land ratio approach loses its appeal in explaining China's economic performance in the late Imperial period. Because, overlooking other vital variables, a man-to-land ratio remains almost meaningless like the face value of any unconverted currency in a foreign market.

In contrast to Malthus, Boserup argues that there is a built-in mechanism in human society to have sustainable technological growth vis-à-vis an increase in human biomass and that in history the population pressure could be a generator of technological change rather than a retardant for it.<sup>92</sup> Similarly, neo-institutionalism views population pressure as the driving force throughout history of institutional changes which in turn generated growth.<sup>93</sup> Elvin is among a few 'Boserupians' who

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<sup>87</sup> Liang, *Dynastic Data*, pp. 207, 263, 272, 274.

<sup>88</sup> Xu, 'Economic Growth of Shandong'.

<sup>89</sup> Li, 'Ten Mu per Farmer', p. 3; Li, 'Low Population Growth'.

<sup>90</sup> Eng, 'The Silver Standard'; Deng, *Chinese Maritime Activities*, Appendix 3, Deng, *The Premodern Chinese Economy*, Appendix 2; see also Flynn and Giráldez, 'Born with a "Silver Spoon"'; Bjork, 'The Link That Kept the Philippines Spanish'; Geiss, *Peking under the Ming*, pp. 159–64; Cartier, 'Les Importations de Metaux Monétaires', p. 464.

<sup>91</sup> Li, 'Rational Application of Agricultural Resources'.

<sup>92</sup> *Agricultural Growth*, chs 1-2, 4-5; see also Grigg, *Population Growth*, p. 46.

<sup>93</sup> As presented in North's 1993 Nobel Prize winning work entitled *Structure and Change in Economic History*, p. 126.



indicate that continuous technological change in late traditional China was a key factor in allowing the Empire to cope with population pressure until the seventeenth century.<sup>94</sup> Nevertheless, the Boserupian model cannot explain why densely populated East Asia lost its superiority to less populated Western Europe. Boserup treated China as an exception by arguing that the Chinese population went too far away from the so-called 'Boserup Space', an optimal range for population growth and technological advancement.<sup>95</sup> She then slid into the Malthusian camp.

*Technological determinism.* Elvin's core thesis is that China's problem was chiefly technological in that China's rapid population growth finally ate up the benefit of earlier, high level technological achievements,<sup>96</sup> and thus handicapped China's growth.<sup>97</sup> He described this as 'quantitative growth, qualitative standstill', or extensive growth with no improvement in per capita income. Elvin's more recent works suggest a technology-cum-investment lock-in which led to low-growth path dependency.<sup>98</sup> Similarly, Kelly attempted to portray the Song Period as a case of one-off growth of a Smithian type without technological breakthroughs.<sup>99</sup>

Technological determinism describes the Ming–Qing Period fairly well because unprecedented population growth did occur. Alas, it does not explain how and why China managed to reach such a high technological level in the first place. It is hard to prove a case that early generations were able to delay the impact of diminishing returns by inventing new technology by 'guessing right' ahead of time while the later generations somewhat lost such ability. It is particularly doubtful whether technological growth really slowed down during Ming–Qing times. If historians take account of the 'green revolution' which was marked by the adoption of the European calendar-making technique, a wide range of new crops from Europe (such as the potato) and the New World (sweet potatoes, maize, chilli, cotton and groundnuts), it is indeed a period of technological 'windfall'. Also, in reality technical inventions and innovations do not always directly translate into output and income. It is normal to have time lag between inventions and their applications. So, invention rate alone is not the sufficient condition for an economy to slow down at the same time and to the same degree. China's economy may not have been 'trapped' as a recent study suggests that China's living standards were still high by world standards during the late Qing.<sup>100</sup>

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<sup>94</sup> Elvin, 'Skills and Resources', pp. 112-13.

<sup>95</sup> Boserup, *Population and Technical Change*, pp. 87-90; see also Coleman and Schofield, *The State of Population Theory*, p. 123.

<sup>96</sup> Elvin, *The Pattern*, chs 17-18.

<sup>97</sup> Elvin, *The Pattern*, p. 313; see also Fei and Liu, 'Population Dynamics'.

<sup>98</sup> Elvin and Su, 'Engineering the sea'; also see Elvin, 'The Environmental Legacy'.

<sup>99</sup> Kelly, 'Smithian Growth'.

<sup>100</sup> Pomeranz, 'Rethinking Eighteenth-Century China', and *Economy, Ecology, Comparisons and Connections*.

Furthermore, although the efficiency of traditional technology was not continuously improvable, it certainly has a very long 'shelf life'. In Europe, trial-and-error based 'traditional' technology promoted some far-reaching changes including geographical discoveries in the fifteenth century and a long line of technical improvements to machinery at the hands of artisans including James Watt. In China, according to Buck, as much as 25 per cent of agricultural growth during the 1930s was owed to streamlining of traditional technology.<sup>101</sup> If invention rate and new technology are not the sufficient condition for modern growth to take place, China's retardation is likely to have been much more than merely a failure to take full advantage of the indigenous technology or to adopt European technology.

Bray blamed the unique technical feature of rice cultivation which is allegedly able to suck in any amount of capital and labour inputs without reaching the point where the marginal product of labour equals zero.<sup>102</sup> So, rice farming had no negative returns for its potential was never to be fully realised. Rice-farming Asia, she argued, had little surplus labour and capital available for non-agricultural and non-rural development. Her theory indicates that an Asian rice economy will only break away from this trap when subject to external shocks. Naturally one would ask why rice-producing Japan modernised and why China that never had a mono-crop agriculture did not make it. The fact that greater external shocks like the Opium War were befallen on Qing China than in Tokugawa Japan helped but little. Wet rice cultivation is thus not the determinant factor in development in East Asia. To find a way out, Bray treated Tokugawa Japan as a petty commodity producer that could escape from the constraint of rice farming, ignoring the fact that China was a far more ancient and active petty commodity producer than Japan.<sup>103</sup>

*Rent-seeking government and exploitative landlordism hypothesis.* A revisionist view treats China as a unique case in which owner-farmers and small landlords prevailed compared to the large feudal holdings in much of medieval Europe and pre-Meiji Japan.<sup>104</sup> Based in mainland China and orchestrated by Maoism, scholars of this school held that small owner-farms could barely maintain subsistence because of the combination of their low productivity and heavy tax burdens. Most tenants on larger estates also lived at subsistence level for they were ruthlessly exploited by landlords for rent. Because the government had only non-productive fiscal policies while landlords were merely interested in re-investing in land and maintaining an extravagant life-style,

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<sup>101</sup> Buck, *Land Utilization*, p. 203.

<sup>102</sup> Bray, *The Rice Economies*.

<sup>103</sup> *The Rice Economies*, p. 217.

<sup>104</sup> See Table 1.

the economy as a whole was locked in stagnant agriculture with a lack of economies of scale, weakness in the social division of labour and a deficiency in the formation of both the capitalists and the proletariat – all harmful to capitalist industrialisation. The school thus claimed that China's indigenous capitalist growth potential was retarded by China's income distribution system.<sup>105</sup> Often Western imperialism was added as another key retardant for native modern growth.

Some scholars attributed China's stagnation to the small scale in family-cum-farming. Bray viewed underdevelopment of capitalism in Chinese agriculture as a result of the overwhelmingly small landholding pattern in the entire post-Han history (220–1911).<sup>106</sup> Huang's study suggests that since around AD 1000 the 'familisation' of rural production in the Yangzi Delta, China's most advanced farming zone, led to economic 'involution'.<sup>107</sup> But in terms of small holding, China was not alone. Land reforms in Russia (1906–11), Japan (1873) and South Korea (1947–8) all aimed to create small landholding farms as a necessary step towards capitalist industrialisation.<sup>108</sup> Large-scale farming is thus not necessary to help industrialisation, a phenomenon which is called 'diseconomies of scale' in farming. Why then should such a landholding pattern be a problem for Chinese economic development?

Regarding exploitation, supposing that all the agricultural surplus were taken away from the producers in the forms of rent and tax, the ordinary farmer would have little left to support a bigger family. Population growth would thus have to be modest simply because of the prevailing poverty among the vast majority in society. Indeed, the Tokugawa feudal system put the Japanese population under such a check, as convincingly argued by Feeney and Hamano.<sup>109</sup> On the other hand, if population increase is a sign of a retained agricultural surplus among the masses, the notion of the excessive rent-seeking landlord class/state collapses.

Despite the fact that the rise in landlordism is often represented as its central feature, the period between mid-eighteenth century and the end of the nineteenth century witnessed China's population to triple at an annual rate of 1.45 percent.<sup>110</sup> One

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<sup>105</sup> Numerous works from this school, for example, Han, *Commercial Economy*; Han, *Society and the Economy*; Sanlian, *Sprouts of Capitalism*; Xie, *Selected Materials*; Li, 'China's Landlord Economy'; Fang, 'Economic Structure'; Fang, 'Petty Peasant Economy'; Fang, 'Peasant Commercial Production'; Liu, 'Capitalism Never Developed'; FDL *et al.*, *Bourgeoisie in Modern China*; Wang, 'Emergence of Capitalism'; Wu, *Capitalism and the Domestic Market*; Zhou and Xie, *Study of Tenancy*; Cao, *Agricultural-Economic History*. See also Lippit, *The Economic Development of China* and Riskin, 'Surplus and Stagnation in Modern China'.

<sup>106</sup> Bray, 'Section 41: Agriculture'.

<sup>107</sup> Huang, *The Peasant Family*.

<sup>108</sup> Gatrell, *The Tsarist Economy*, p. 111; Francks, *Japanese Economic Development*, p. 133; Hasan and Rao, *Korea*, p. 206.

<sup>109</sup> 'Rice Price Fluctuations and Fertility'; cf. Hanley, *Everyday Things in Premodern Japan*, ch. 6.

<sup>110</sup> Based on the data for 1741-1851 and 1863-87 from Liang, *Dynastic Data*, pp. 4-11; 251-4, 256-7; cf. McEvedy and Jones, *Atlas of World Population History*, p. 167.

possible explanation could be that the Chinese landlords and bureaucrats generated the population growth due to their good life. If so, the annual growth by these two strata would have to be impossibly high: 2.5–4.8 per cent (if landlords and bureaucrats with their families were 40 per cent of the total population) or 3.3–6.3 per cent (if they represented 30 per cent), both being too high a proportion in the population according to most works, or 5–19 per cent (if they constituted 10 to 20 per cent, which are the more likely proportions).<sup>111</sup> These rates are beyond the human biological capacity for reproduction. So, a rapid demographic growth must be a result of a better material life among the general public.

To elaborate this point further, it is often mentioned that during the Ming–Qing Period the tenancy rate was higher in South than in North China.<sup>112</sup> Landlord determinism expects to see less population growth in the south than in the north. But evidence shows just the opposite. South China had a higher population growth than North China which means the landlord class was unable to siphon off the agricultural surplus. In the north where the tenancy rate was low, population growth was also strong which suggests that the government was inefficient in tapping away the surplus, too.<sup>113</sup> Here, population growth itself provides an acid test of the rent-seeking government and exploitative landlord hypothesis. In reality, the rent-seeking tendency of the Chinese state was checked by society and the bureaucracy was rather professional by most standards.<sup>114</sup> After all, the state only controlled a low percentage of GDP.<sup>115</sup>

Moreover, if excessive rent-seeking by the landlord class and the government had taken place, the Marxian concept of 'primitive capital accumulation' and the formation of a 'proletariat' should have been present, and China should have headed for capitalism. That was not the case.

*Role of the state.* The role of the state was given strong emphasis by Gerschenkron, North and Thomas in explaining growth in the West.<sup>116</sup> The same 'visible hand' approach appears in analysis of Asian tigers' miracle growth experience in recent writings by Alam, Amsden, Wade *et al.*<sup>117</sup> With the benefit of hindsight, the contemporary concept of 'predatory' and 'developmental' states has been used to

<sup>111</sup> See Chang, *The Chinese Gentry*; Rawski, *Education and Popular Literacy*, p. 23.

<sup>112</sup> Chao, 'Land Ownership Patterns'; Li, 'Intensification of Rice Production'; Li, 'Rational Application of Agricultural Resources'; Li, 'Ten Mu per Farmer'; Li, 'Husband and Wife Tilling Together'.

<sup>113</sup> Liang, *Dynastic Data*.

<sup>114</sup> Deng, *The Premodern Chinese Economy*, chs 2–4; Wong, *China Transformed*, pt. 2.

<sup>115</sup> Feuerwerker, 'The State and the Economy', p. 322; Will, *Bureaucracy and Famine*.

<sup>116</sup> Gerschenkron, *Economic Backwardness in Historical Perspective*; North and Thomas, *The Rise of the Western World*.

<sup>117</sup> Alam, *Governments and Markets*; Amsden, 'A Theory of Government Intervention'; Amsden, *Asia's Next Giant*; Wade, *Governing the Market*; Adelman, 'Prometheus Unbound'; Lall, 'Malaysia'; Aoki and Okuno-Fujiwara, *The Role of Government*.

examine China both implicitly and explicitly. Bureaucratic efficiency and rent-seeking behaviour are neatly embodied in many depictions of the Chinese state including 'Oriental despotism' (referring to the state apparatus),<sup>118</sup> 'conservatism' (applied to the entire elite),<sup>119</sup> and 'all encompassing' power of the state (combining both the apparatus and elite).<sup>120</sup> At its centre, Fairbank's 'dynastic cycle' has a highly-efficient predatory state. Mokyr's recent view that Chinese technology depended on the state is another conjecture.<sup>121</sup> The Marxian AMP, which portrays the Oriental state as the sole economic decision-maker, falls into the same category.<sup>122</sup> In any case, the state is held responsible for China's retardation. The underlying assumption of these works is that the Chinese state was highly efficient in expropriating resources from the economy, distorting the market mechanisms, jamming business links and hindering further growth. For example, Fairbank maintained that as a well-organised institution the Imperial bureaucracy possessed enormous coercive power to control the merchant class and to obstruct any undesirable or 'nonorthodox' growth in the economy. Moreover, as an attractive profession, state service siphoned off a continuous supply of the best educated and most talented citizens.<sup>123</sup>

Some evidence can certainly be found to support claims that the Chinese state was both efficient and rent-seeking. China has remained one of the largest political units since Christ. From the thirteenth to the end of the nineteenth century, hundreds of thousands of tons of tax grain were shipped each year from South China to feed the northerners. This formed the most lasting, long distance, non-market-driven shipment of goods in world history. The Great Walls, the most expensive defence system in the premodern world, were initiated and supported by the state with huge material and labour inputs. Most dramatically, there were cases of the sudden abandonment of the multiple voyages by the Ming Imperial navy to Southeast and South Asia, the Middle East and probably East Africa and the sweeping imposition of maritime bans along the empire's coast-lines.<sup>124</sup>

However, for extreme versions of the predatory state, there is also plenty of evidence to suggest that the Chinese state was benign and weak. Or, it appeared benign because it was a very inefficient predator for rent. How can we explain the widespread

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<sup>118</sup> See Wittfogel, *Oriental Despotism*.

<sup>119</sup> See Wright, *Chinese Conservatism*.

<sup>120</sup> Landes, *The Unbound Prometheus*, p. 15.

<sup>121</sup> Mokyr, *The Lever of Riches*, pt. 3.

<sup>122</sup> See Krader, *The Asiatic Mode of Production*; Brook, *The Asiatic Mode of Production*.

<sup>123</sup> Fairbank, *Chinese Thought and Institutions*; Fairbank, *The United States and China*; Fairbank, *The Cambridge History of China*. See also Balazs, *Chinese Civilization*; Qian, *The Great Inertia*. Perkins put it straightforwardly: the Chinese state was an obstacle to economic growth in the nineteenth century (1967). Many scholars support such views.

<sup>124</sup> Cf. Deng, *Chinese Maritime Activities*, chs 1, 4.

market activities (regional, inter-regional and overseas) over the long run?<sup>125</sup> By definition, commercialisation on that scale can hardly be 'engineered' and 'controlled' by a single centre of power even with modern information technology. Given the scope of commercial activity, one must assume either that the anti-market policies of the state were cancelled out by the market, or that the state was persuaded to be friendly to markets. A lack of control explains why in traditional China urban centres, science and technology flourished.<sup>126</sup> These achievements in turn dispute the judgement that an institutional barrier was not any more prohibitive in bureaucratic China than in Europe where an authoritarian bureaucracy was supposedly absent. After all, the first-recorded large-scale intensive growth (growth in per capita terms) occurred in Song China, not in Europe nor Japan.<sup>127</sup>

Also, for argument's sake, if the postulation of a super-efficient Chinese bureaucracy were accepted, historians would still ask what was the incentive for the Chinese state to distort the market, interfere with business and hinder growth and why did the Chinese state persist in 'misusing' its power over the centuries, given the degree of economic sophistication that China managed to reach, such a policy could only have entailed enormous opportunity costs for the economy as a whole as well as for the government revenue and popularity?

Turning to the drain of talent, evidence shows that openings in the bureaucracy were entirely limited.<sup>128</sup> In the Northern Song Dynasty, the national average candidate-success ratio was 10.2:1; while the estimated ratio for the Qing Dynasty was even poorer, varying between 30:1 and 100:1.<sup>129</sup> The long-term pass rate in the examinations is estimated as less than 10 per cent of all candidates.<sup>130</sup> Only a minority of the educated became officials. The majority of the Chinese literati had to, and did, make a living outside officialdom which inevitably benefited rather than harmed the economy with quality human capital.<sup>131</sup>

Or, perhaps China's failure was rooted in its centralised state structure which overruled internal competition while inter-state competition in Europe worked in comparable ways to market competition and led Western Europe towards an Industrial

<sup>125</sup> Skinner, 'Marketing and Social Structure', Skinner, *The City* and Elvin, *The Pattern*.

<sup>126</sup> See Needham, *Science and Civilisation in China*; Skinner, 'Marketing and Social Structure'; Skinner, *The City*; Elvin, *The Pattern*.

<sup>127</sup> Jones, *Growth Recurring*; see also Goudsblom *et al.*, *The Course of Human History*, ch. 5.

<sup>128</sup> See Deng, *Development versus Stagnation*, Appendix I; Fei, *China's Gentry*, pp. 71-32; Chang, *The Chinese Gentry*; Ho, *The Ladder of Success*, pp. 35-6; Eisenstadt, *The Decline of Empires*, ch. 8; Chaffee, *Education and Examination*, chs 3-5.

<sup>129</sup> Wang, *Civil Examinations*, pp. 65-66; also see Chang, *The Chinese Gentry*, pp. 83-92; Fairbank, *Chinese Thought and Institutions*, pp. 251-68; Ho, *The Ladder of Success*, p. 262; Deng, *Imperial Examination System*, pp. 163-4.

<sup>130</sup> Eisenstadt, *The Decline of Empires*, p. 60.

<sup>131</sup> See Deng, *Development versus Stagnation*, especially Appendix 1.

Revolution.<sup>132</sup> Mokyr's suggestion does not explain why and how this centralised state at least tolerated growth in China until the sixteenth century and possibly later? More important, China always faced competition from the Steppes and increasingly so after AD 1000 considering the Tartars, Mongols and Manchus. So, competition among political units does not seem to have been a necessary condition for growth to continue after the Song.

Many scholars tend to forget that the traditional Chinese state was premodern if not primitive. It was either 'predatory' nor 'developmental'. Compared with early modern states in Western Europe and Japan, the Chinese state looks weak and inefficient. It is therefore dubious to blame the Confucian state for what it was not designed for and virtually had no control over.<sup>133</sup> In particular, in the Gerschenkronian model the role of state is relevant to objectives to generate modern growth. This agenda looks rather irrelevant for Chinese bureaucracy of premodern times (whose designed tasks and commitments were chiefly to maintain social order and to secure people's other basic needs).<sup>134</sup> It is a tall order for the premodern Chinese state to behave like a Gerschenkronian institution as that kind of state of 'good behaviour' was yet to be developed, tested and refined.

*World-system paradigm.* Finally, attempts have also been made to explain China's underdevelopment in the macro-context of the world economy. Lenin and Wallerstein both indicated the existence of a developmental hierarchy in a super-macro system embracing the entire world.<sup>135</sup> Within this world-system, economic growth in less developed societies is dictated by the advanced countries. Imperialist/colonialist powers exploit the underdeveloped countries in the interests of the metropolitan populations. It is in the interest of such powers not to see modern economic growth taking place in the Third World. It is an appealing thought, the diktat imposed on China by the West, Russia and Japan after 1840, exemplifying the point. In terms of timing, the almost symmetrical of the downfall of China vis-à-vis the rise of the West and Japan since the Opium War in 1840 implies some kind of world-wide causality may have been at work. But given that China and Western Europe reached more or less the same technical and economic levels around the seventeenth century,<sup>136</sup> world-system determinism does not

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<sup>132</sup> Mokyr, *The Lever of Riches*, ch. 9.

<sup>133</sup> Feuerwerker, 'The State and the Economy', pp. 321-4; Jones, *Growth Recurring*, ch. 8. Any forced analogy between the Soviet command economy under Stalin's totalitarianism and the function of the premodern Chinese state is without illumination.

<sup>134</sup> Wong, *China Transformed*, pt. 2.

<sup>135</sup> Lenin, 'Imperialism'; Mao, *Selected Works*; see also Wallerstein, *World-System*.

<sup>136</sup> Hartwell, *Iron and Early Industrialism*; Hartwell, 'A Cycle of Economic Change'; Elvin, *The Pattern*; Elvin, 'China as a Counterfactual'; Bray, 'Agriculture'.

tell us how and why followers eventually became leaders and vice versa, as if the world order is given both *ab extra* and *a priori*.

Goldstone suggested from another angle that there existed a macro system across Eurasia during the early modern period. Key societies (namely England, France, Germany, the Ottoman Empire, China and Japan) synchronised in at least two areas – population pressure and resource constraints (as seen in food prices, elite employment opportunities and government budgets). Crises and 'revolutions' were the universal result.<sup>137</sup> If this is true, why did revolutions in seventeenth century England, eighteenth century France and, to a certain extent, nineteenth century Japan, usher in a new era of industrial growth, but proved unhelpful to their Ottoman and Chinese counterparts? Or, why did a further developmental synchronisation have to fail, which left mainland Asia to poverty but led Western Europe to abundance?

No doubt, it is always easier to blame external factors for internal problems. World-systems analysis serves such purposes. The world-system paradigm has been the official line in mainland China and appeared in most textbooks there. We only have to ask why economies like Taiwan, South Korea, Malaysia and Indonesia, which had deals from the same world-system just as raw as China, have so far developed so much further than China?

## V

The sheer number of possible hypotheses reviewed here shows just how many variables need to be taken into account in dealing with the Chinese experience of the past millennia. This survey also indicates just how far apart scholars are in solving the paradox in Chinese past. These hypotheses are valid in explaining the development in many parts of the world or for some parts of the Chinese past. But when dealing with long-term premodern Chinese history as a whole, they become in one way or another inadequate. A synthesis is far from being easy. The real challenge comes from how to embrace numerous variables, none constant, in a framework to explain how rational choices led a sophisticated economy to a developmental dead end. With such pluses and minuses, *caveat emptor*.

There are two common problems. First, although all these models have offered sensible hypotheses of why China declined, they cannot satisfactorily explain why China rose in the first place, or vice versa. The cause of this problem is the seeming inconsistency or incompatibility between China's achievement and decline, which forms the very core of China's paradox. Second, in the use of Europe as a universal benchmark the contributory factors to European growth are often taken as the basic. If a

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<sup>137</sup> *Revolution and Rebellion*, ch. 1 and pp. 352-3, 355, 359-60.



society enjoyed these conditions/factors, growth is expected to have taken place. If not, something must have gone wrong. In searching for an answer, anything which made China distinct from the West is inevitably considered to have been responsible for China's downfall. One tends to fall into the trap of afore-mentioned counterfactualism.

To avoid these common pitfalls, my own framework to explain Chinese economic history over the long term is that there existed a convergent and self-regulating 'trinary structure' of agricultural dominance, the landholding peasantry, and physiocratic government. This structure created an overall equilibrium and allowed long-term growth of a particular type. In this system, the peasantry, not the state, played a central role in determining China's path.<sup>138</sup>

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<sup>138</sup> Deng, *The Premodern Chinese Economy*.

## VI

Economic history seeks to understand the nature and pattern of economic change over time. Chinese experience over the last millenia reached premodern peaks such as the sheer size of territory, extents of the market, number of people, the magnitude of output, range of technological inventions, degrees of environmental manipulation, types of institutions, varieties of policies/regulations, scopes of international influence and so forth. China thus forces economic historians to treat the country as seminal. Also, with rich materials to work on, China embraces in its past almost all the key issues for economic history. China's importance and utility in world economic history will remain and research in Chinese economic history will attract even greater attention from the scholarly world in this new millennium. Among a great many topics, the function of the Chinese state including the standardisation of time, language, roads, currency, weights and measures as well as construction and maintenance of the Great Walls and Grand Canals may well have been the state response to the demand for public goods from the general public to lower transaction costs in the economy rather than means to strengthen Imperial rule.<sup>139</sup> Although regional, sectoral and short-term studies will continue to play their roles in the study of Chinese economic history, there will be a good chance for general, cross-regional/sectoral and long-term studies to rise because of the comparative advantage of the latter to reflect scale, scope, duration and aggregates. New analytical tools will be in use to facilitate wider research into China's long-term experience.<sup>140</sup> Methodologically, a positive approach will be more consciously preferred to a normative approach. In particular, actual development in the economy will overrule what the Imperial Court said about the economy. For example, the effectiveness of government control cannot be fully assessed unless one goes beyond the government sector and even beyond the Chinese territory.<sup>141</sup> Last but not least, study in the transformation of the Chinese socio-economic system will tell us more about the nature of the Chinese system in the past. Such a task will rely heavily on horizontal comparisons between mainland China and other 'Chinas' – Taiwan, Hong Kong, Singapore and millions of 'overseas Chinese'.<sup>142</sup> Systematic comparisons in ideologies, family structures, inheritance patterns, market responsiveness and incentives, policy sensitivities, economic propensities and so forth will help identify the critical conditions for China to change or not to change.

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<sup>139</sup> See Wong, *China Transformed*, pt. 2; cf. Landes, *Revolution in Time*, p. 33.

<sup>140</sup> Among them, Jones's macro- and multidimensional, comparative framework which can be defined as a 'panorama model', may be more widely adopted because of its obvious advantages over many other frameworks. See for example Jones, *The European Miracle*.

<sup>141</sup> See Deng, *Chinese Maritime Activities*.

<sup>142</sup> For Taiwan, see Chao and Myers, *Chinese Democracy*.

(8,580 words – text; 2,500 – footnotes)

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