

Chapter 1

Introduction: Economic Performance and Background of the Mao Era



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Abstract What macroeconomic changes and achievements have the Chinese economy undergone during the Mao era? We first summarize the economic achievements and characteristics of the Mao era from several aspects, then consider the mechanisms that caused the growth and changes, and finally briefly review the institutional and policy backgrounds that enabled or created such a performance.

Introduction

The economy of the People's Republic of China (PRC) since its foundation in 1949 can be divided into two major periods: before and after the implementation of the reform and opening-up policy in 1978 (i.e., before 1978, the period of the “planned economy,” and after that, the period of the “market economy”). Alternatively, we can consider that the former was an era of socialism, whereas the latter was that of (Chinese) capitalism. If we were to label the eras after people, we could say that the former was the era of Mao Zedong (Mao era) and the latter was that of Deng Xiaoping (Deng era). After the Mao era, which was marked by great turmoil and upheaval and relatively low growth (as discussed in Sect. 1.1), the Chinese economy under Deng, who boldly pursued reforms and openness, achieved sustained high growth that attracted global attention and is now the world's second largest economy, with the momentum to catch up with the United States. Therefore, in recent years, the struggle for supremacy between the U.S. and China has become increasingly widespread and serious. Although measuring economic performance only in terms of growth rates and GDP is challenging, at least in terms of commonly used economic indicators, it may be regarded that Mao failed and Deng succeeded.

What macroeconomic changes and achievements have the Chinese economy undergone during the Mao era? (In this paper, we refer mainly to the pre-1977

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period as the post-1978 period is referred to as the reform and opening-up era.) In this chapter, we first summarize the economic achievements and characteristics of the Mao era from several aspects, then consider the mechanisms that caused the growth and changes, and finally briefly review the institutional and policy backgrounds that enabled or created such a performance.

In the first section, we focus on the growth rate of the Chinese economy in general during the period 1952–1977. China is supposed to have achieved a relatively high growth rate of over 6%, but we wonder whether this was really the case. We consider the growth rate and its fluctuations during this turbulent 25-year period by changing the method for measuring the growth rate and by making our own estimates. Section 1.2 summarizes the economic performance and characteristics of this period regarding various structural changes in the economy (e.g., industrial structure, employment structure, and trade dependence). Section 1.3 uses four models to explain the economic framework known as the planned economy of the Mao era. Finally, Sect. 1.4 provides an overview of the institutional and policy background that serves as the framework for this growth and structural changes.

1.1 Reality of the Economic Growth of the Mao Era¹

When evaluating a country's economic performance, the growth rate seems to be the most important factor to consider. This case is especially true for the economies of developing countries. If a country's economy stagnates and fails to grow despite that its external environment and natural conditions are not quite abnormal, the country is judged to have adopted the “wrong” policies. However, if, it sustains high growth, its economic policies are frequently highly evaluated as having been “right.”

It has been officially stated that the Chinese economy was growing at a high annual rate of 6.2% during the Mao era, despite the catastrophes of the Great Leap Forward (GLF) (1958–1961) and the Cultural Revolution (CR) (1966–1976), which both caused innumerable sacrifices to China. This can be considered an official message that China's socialist economy has developed in the long run, despite that it has experienced extraordinary difficulties due to Mao's political misguidance. Meanwhile, some economists, such as Mao Yushi, the former president emeritus of the Unirule Institute of Economics in Beijing, have argued that China experienced little economic growth during this period.² In fact, peasant incomes barely rose during this era, and many urban workers did not benefit from wage increases under the so-called “rational low wage system.”³

This scenario leads to the following question. Can China's official growth statistics be trusted? It is well known that Thomas Rawski insisted that the official growth rate for 1998–1999 was extremely overestimated and it was actually as low as approximately one-third of the officially published version (Rawski, 2001). Even within China, as once criticized by Premier Li Keqiang, the official GDP index has often been examined due to suspicion. This must have been much less reliable in the Mao

era. First, the statistical system was not developed yet at that time, and most of the statistical personnel were only allowed to go during the CR so that the statistical mechanism did not function properly for a while. In addition, Chinese officials, especially those in the provinces, have tended to overreport statistical figures related to their regional economic performance. Even today, they tend to overreport their regional GDP and growth rates, especially for their own political motives (e.g., career advancement or competition with rival regions). Therefore, even when examining the official GDP statistics of the Mao era, estimating growth rates, in a different manner than the official GDP statistics, is necessary.

Before making our own estimates of the growth rates, let us verify how different methods of estimation affect growth performance, even when the official statistics were used. We calculated the growth rates for the period 1952–1977 using three different methods. The first one is to simply average the annual growth rates over the period, referred to as the (averaged) “average growth rate,” for convenience. Second, the growth rate can be measured based on the exponential growth rate, which is assumed to grow exponentially from the GDP level in the initial year to that in the end year. For the exponential growth rate obtained in this manner, the actual results of the years between the initial and final years are completely ignored. Finally, the third method is to apply the regression equation $\ln(Y) = a + b \cdot t + \varepsilon$ (where Y is GDP and t is time) and calculate the average growth rate by the regressed coefficient b thus obtained. This growth rate is called here the “regressed growth rate.” The results are summarized in Table 1.1.

If we simply average the annual growth rates, the growth rate during the Mao era is indeed 6.2%, as officially stated. The exponential growth rate from the first year of 1952 to the end of 1977 was also quite close to the average growth rate (5.9%). However, the regressed growth rate obtained by regressing the GDP on time (year) as the only explanatory variable is much lower than these two growth rates (2.3%).

The per capita growth rate is obtained by subtracting the population growth rate from the total growth rate above (refer to the lower part of Table 1.1). Surprisingly, even if we rely on official GDP statistics, the long-term economic growth rate during the Mao era was only 0.23% per capita. Hence, in this sense, Mao Yushi and his colleagues are almost correct. Basically, people had lived in poverty under Maoist regime, and the overwhelming majority of peasants particularly were forced to live near or below the poverty line (the level at which they could not even obtain enough calories to survive) until the reform and opening-up strategy began. Even for non-agricultural employees, their wages were raised only twice during the Mao era, but only for a few of them.

Therefore, the question is what would be the growth rate during this era, if estimated independently and in a different manner? In this study, we conducted an independent estimation using the following method. First, assuming that quantity data are more reliable than value data despite that these are official statistics, we collected five series of quantity data from 1952 to 1977 and calculated their growth rates. The physical quantity statistics used in this study are food production, iron and steel production, energy consumption, passenger turnover, and freight turnover. Then, we used the input–output table of 1992 to calculate the value added per unit

Table 1.1 GDP growth rates based on official statistics (%)

Year	Average of annual rates ^a	Exponential rate of growth ^b	Coefficient of regressed GDP ^c
1952–65	6.85 ^d	6.03	1.79
1966–77	6.07	5.38	2.77
1952–77	6.23 ^e	5.93	2.3
1978–2000	9.79	9.66	4.15
<i>GDP growth per capita</i>			
1952–65	5.04	4.23	0.20
1966–77	3.8	3.16	0.50
1952–77	4.28	3.9	0.26
1978–2000	8.52	8.4	2.85

Source Author's estimation

Notes

^a Simple averages of yearly growth rates

^b Exponential growth rates between the initial year and the end year

^c Growth rates regressing GDP only with time(year) as an explanatory variable

^d Between 1953 and 1965

^e Between 1953 and 1977. Growth rates between 1978 and 2000 are out of the scope of our analysis, but calculated for reference

of these five types of data. We multiplied this unit value added by the quantity data of each year during 1952–1977 and obtained the value added of each year (based on 1992). We calculated the weights related to the five items for each year in this manner as well. Finally, by multiplying the growth rates of the five series of data by these weights, we obtained the physical index growth rate with value-added weights. This can be called “alternative estimates of growth” (AEG).

The AEG rates were calculated, and the average growth rates for the 1952–1977 period are shown in Table 1.2.

By contrasting this table with Table 1.1, we obtain the following findings:

- (1) Regarding the average or exponential growth rates, the official growth rate is much higher than the AEG rate during the era of concern. This is probably because a relatively large weight is given to grain production, which grows more slowly than steel production and energy consumption.
- (2) However, the results are quite the opposite for the regressed growth rate. That is, the official growth rate was unexpectedly lower than the AEG rate. This fact may lead to the conclusion that China's economy seems to have grown faster than the official growth rate during the Mao era. Nevertheless, the absolute AEG rate remained quite low. Moreover, this unexpected phenomenon may have occurred only in the severe economic decline of 1961 (i.e., –26.6%). If we regard this as an outlier, assuming that the actual rate declined only (e.g., –10%), the official

Table 1.2 Estimates of the GDP growth rate based on AEG* (%)

Year	Average of annual rates	Exponential rate of growth	Coefficient of regressed GDP
1952–65	3.19	2.82	2.04
1966–77	4.21	3.24	4.30
1952–77	3.68	3.41	3.52
1978–2000	1.92	1.47	1.36
<i>GDP growth per capita</i>			
1952–65	1.38	1.01	0.46
1966–77	1.94	1.02	2.03
1952–77	1.73	1.38	1.48
1978–2000	0.66	0.21	0.06

Source Author's estimation

Note *Alternative estimates of growth rate (AEG) based on quantitative data of five items. See text for more details

- average growth rate in terms of the regressed growth rate from 1952 to 1977 would be higher than the AEG rate (reaching 6.4%).
- (3) Regarding the GDP per capita growth, this conclusion holds true because the population growth rate is the same regardless of the official growth rate or AEG rate. Thus, China's per capita income probably increased at a rate of 1.48% per year during this era. Additionally, the average standard of living of the population has improved slightly, but still quite slowly, over the long term.
 - (4) Whether we rely on official statistics or alternative estimations described previously, the growth rate during the CR period (i.e., 1966–1977) was higher than that of the earlier period (i.e., 1952–1965). Hu (2008) emphasizes that the Chinese economy was able to grow despite that this tragic political movement severely undermined the overall system. His argument is based on official statistics, but also supported by our own estimates. Conversely, the GLF and its failures have handled a more devastating blow to the Chinese economy than the CR.

We cannot declare that all the physical quantity statistics of the Mao era were recorded correctly. Further, we cannot deny the possibility that, during certain periods, particularly during the abnormal periods of the GLF and the CR, some of the statistics may have been overestimated. Official statistics, even physical quantities, are not always reliable. However, given that physical quantity statistics are probably more reliable than value ones, the alternative estimate of the AEG growth rate suggests that the long-term average growth rate by official statistics during this period was probably overestimated. Basically, China may not have achieved a high growth rate of 6.2%, as officially claimed. The actual growth rate may have been about 3.5% on average, or about 1.5% on a per capita basis (incidentally, the annual growth rate of the AEG is depicted in Fig. 1.1 to be compared with the official rate).



Fig. 1.1 Official growth rate compared to alternative estimates (AEG) (%). *Source* Author's estimation

Nevertheless, in the 25 years leading up to the end of the CR, the Chinese economy during the Mao era grew slowly, if any, compared with the average growth rate of the post-reform period (1978–2000). However, to achieve such a certain level of growth performance, Mao's economy had to pay enormous material and human costs, or make tremendous sacrifices, as described in detail below.

1.2 Structural Changes

The economy is composed of various structures; therefore, changes in these structures also vary. In this section, we examine various aspects of the Mao economy, focusing on structural changes in several aspects, such as industrial structure, growth structure, price fluctuations, development of medical care and education, etc. Unlike the growth rates discussed previously, all the data here are based on official statistics. All these data were from Guojia Tongjiju Guomim Jingji Zonghe Tongjisi (ed.) (2005) (hereinafter, Compendium 2005).

1.2.1 Changes in the Industrial Structure

The industrial structure is categorized into three: primary industry, mainly agriculture; secondary industry, comprising industry and construction; and tertiary industry, including commerce, transportation, public administration, education, and medical

Table 1.3 Change in industrial structure (1952–2000) (%)

Year	Primary industry	Secondary industry	In which manufacturing industry	Tertiary industry
1952	50.5	20.9	17.6	28.6
1957	40.3	29.7	25.4	30.1
1962	39.4	31.3	28.3	29.3
1965	37.9	35.1	31.8	27.0
1970	35.2	40.5	36.8	24.3
1975	32.4	45.7	41.5	21.9
1978	28.1	48.2	44.3	23.7
1980	30.1	48.5	44.2	21.4
1985	28.4	43.1	38.5	28.5
1990	27.0	41.6	37.0	31.3
1995	20.5	48.8	42.3	30.7
2000	16.4	37.9	43.6	33.4

Source Author's calculations based on Compendium (2005)

services. To measure the progress of industrialization among these four categories, we used only industry from the secondary industry category. During the Mao era, the Chinese economy was mainly agricultural until the beginning of the CR, although industrialization gradually progressed. During the CR, the secondary industry category surpassed the primary industry category. In 1985, soon after the start of the reform and opening-up policy, the tertiary industry category surpassed the primary industry category, similar to Petty's law of development economics. As shown in an international comparison, the industrialization rate in China during the entire era was higher than the standard pattern of development. This is a result of "socialist industrialization," which was consciously promoted by the Mao government (Nakagane, 2002) (see Table 1.3).

When the industrial sector is broadly divided into heavy industry (i.e., producer goods industry) and light industry (i.e., consumer goods industry), the ratio of heavy industrialization increases with the economic development, which is called Hoffman's law. This law is not as popular as Petty's law, but it is a standard pattern that can be applied to the development process of many industrial countries. When we calculated the ratio of heavy industrialization to determine whether this law can be applied to the Mao era, we found that it has increased significantly since the 1950s (see related figures in Chaps. 8 and 9). Clearly, this reflects the "heavy industry-oriented development" strategy of the period rather than Hoffman's Law and is a result of investment policy that prioritizes the heavy industry sector, partially for the purpose of strengthening national defense.

Table 1.4 Changes in employment structure (1952–2000) (%)

Year	Primary	Secondary	Tertiary
1952	83.5	7.4	9.1
1957	81.2	9.0	9.8
1962	82.1	7.9	9.9
1965	81.6	8.4	10.0
1970	80.8	10.2	9.0
1975	77.2	13.5	9.3
1978	70.5	17.3	12.2
1980	68.7	18.2	13.1
1985	62.4	20.8	16.8
1990	60.1	21.4	18.5
1995	52.2	23.0	24.8
2000	50.0	22.5	27.5

Source Author's calculations based on Compendium (2005)

1.2.2 Changes in the Employment Structure

As the industrial structure changes, the employment structure also changes naturally, as shown in Table 1.4. The table also shows that most of the labor force remained in the primary industry (i.e., in rural areas during the Mao era). It was not until 2000 that the labor force ratio of the primary sector declined below 50%. However, the employment ratios of the secondary and tertiary industries are almost the same. Given that the output ratios of the two industries are not significantly different, their GDP productivities are largely the same, greatly surpassing the productivity of the primary industry. Basically, a large amount of labor was maintained in rural areas. Consequently, labor-dependent agricultural production with low productivity was developed during this era (see Chap. 5). Clearly, the Chinese countryside can be considered to have been overflowing with surplus labor in the Mao era, still remaining in a stage long before the so-called “Lewisian turning-point,” which is popular among the development economists.

1.2.3 Changes in the Regional Structure

The regional disparity measured in per capita income has attracted attention as a major problem in post-reform China. However, this disparity existed even in the Mao era. China's regions can be roughly divided into coastal and inland regions, which can be further divided into eastern (coastal), central, and western regions. Even before the founding of the country, the coastal areas had many plains, flourished with international interactions. And as discussed in Chap. 9, they were relatively developed

based on the manufacturing industry, mainly the light industry, but the inland areas were more economically backward. Mao Zedong argued in his speech “On the Ten Great Relationships” that 70% of the industry was in the coastal areas, while only 30% in the inland areas and the inland industry should be greatly developed to balance the industrial development. Nevertheless, he proposed a regional balance theory as he believed that the coastal industry has potential and thus should be actively developed to support the inland industry.

In the 1960s, when the “Third Front construction” policy (to be discussed later) was proposed from the national defense standpoint, the emphasis on construction shifted to inland areas, rather than to coastal ones (see Chaps. 8 and 11). Further, the regional disparity among provinces in China, as measured by per capita income, has been increasing. According to Kato Hiroyuki and Chen Kuanghui, this can be largely explained by differences in the industrialization level (Kato & Chen, 2002, p. 48). Basically, the regional structure of the coastal areas, where industrialization had progressed, leading to relatively higher per capita income even before the founding of the PRC, remained basically unchanged during the entire era covered, unlike the lagging inland areas.

1.2.4 Changes in the Growth Structure

According to Hollis Chenery and his colleagues, the standard pattern of growth in the development process is a shift from labor led to capital led and then to a productivity (technology) led (Chenery et al., 1986). When total factor productivity (TFP), which is regarded as a proxy indicator of technological progress, contributes more than 50% to growth, this type of growth is called “intensive.” However, when production factor (capital and labor) contribution to growth exceeds 50%, this type of growth is called “extensive.” In the standard development process, an economy generally shifts from extensive to intensive growth.

Young (1995) and Krugman (1994), among others, criticized the economic growth of East Asian countries, which were praised as the “East Asian Miracle” by the World Bank, for adopting Soviet-style growth policies that still depend heavily on capital. This argument sparked an alarm in China; Zhang (2002), for example, alleged that China’s economic growth also followed the same pattern as in the former Soviet Union.

Several researchers have examined how China’s growth structure and TFP have changed from the Mao era to the present day, reaching roughly similar conclusions. The most common approach is using the Solow-type growth model to determine the total factor productivity as a residual and to calculate the percentage of growth rate that contributed to growth by capital, labor, and TFP. In general, the official statistics of the GDP growth are used for the growth rate, and the number of workers is used for the labor force. However, different conclusions can be reached depending on the estimation of the capital stock, the production function applied, and what is added to the decomposition of the growth rate, other than capital, labor, and TFP.

Table 1.5 Economic growth and total factor productivity: annual average growth rates (%)

Period	GDP	Fixed capital	Labor	Human capital	TFP
1952–1957	6.5	1.9	1.2	1.7	4.7
1957–1965	2.4	5.2	1.5	2.1	–1.0
1965–1978	4.9	7.7	2.4	3.1	–0.2
1952–1978	4.4	5.8	1.9	2.5	0.5
1978–2005	9.5	9.6	1.9	2.7	3.8

Sources Perkins and Rawski (2008), p. 837, Table 21.1

Note Labor is the labor force at 16–65 years old; human capital is the labor force weighted by educational levels

Chow (1993) spearheaded this debate. He used official statistics to estimate the aggregate Cobb–Douglas-type production function for the period since 1952, with several alternative cases for the initial amount of capital. He concluded that no technological progress occurred during 1952–1980, that is, during the Mao era. Dwight Perkins and Thomas Rawski conducted a decomposition analysis of growth from 1952 to 2005 using a Cobb–Douglas-type production function with fixed capital, labor, and human capital as the factors of production. They found that the growth rate of TFP during the Mao era (1952–1978) was only 0.5%, whereas after the reform and opening-up policy (1978–2005), it rose to 3.8% (Perkins & Rawski, 2008). However, the highest contribution of capital to growth has been consistent since the pre-reform era (see Table 1.5).

Chinese researchers have also paid attention to this issue. For example, Wang Xiaolu and his colleagues applied Lucas’s new growth theory, regressed the growth rate on physical capital and human capital, and used the residual as TFP, explaining its content as control variables (e.g., marketization, urbanization, dependence on foreign capital, and dependence on trade). They found that, in the 1953–1978 period, capital was the main source of growth, and its contribution combined with labor to growth was 72.5%. In the 1979–1988 period, labor was the main source of growth, and its contribution to the growth of factors of production combined with capital was 71.4%. In any case, the contribution of TFP to growth is less than 30% (Wang et al., 2009).

Jin Tao and Tao Xinyu considered physical capital, labor, human capital (proxied by expenditures on science and technology), and the following five factors, i.e., urbanization rate, degree of openness to the outside world, industrial structure (ratio of tertiary industry to secondary industry), financial structure (ratio of loans to gross industrial product), government leadership (ratio of fiscal revenue to GDP), and non-state ownership as components of TFP, then regressing these factors on GDP per capita for the pre-reform period (i.e., 1952–1981). They found that only two variables, specifically physical capital and industrial structure, were significant (Jin & Tao, 2015). Meanwhile, when the observation period was extended to 1952–2012, most of the variables became significant. This suggests that TFP, as a proxy for technological progress, was not effective during the Mao era and began to have

an effect only after the reform and opening-up policies started. However, capital remained the main driver of growth, even during the post-reform period.

Certainly, these studies did not provide definitive conclusions about the productivity of the Mao era. This is because, as noted previously, many questions have been raised about the statistics of the era, including GDP. Much debate has been going on about particularly the estimation of capital. Nevertheless, we cannot deny that the growth of the economy during the era concerned was extensive, relying on inputs of factors of production; however, the contribution of technological progress as expressed in TFP was small. Growth at that time was largely capital dependent. Moreover, this trend continued even during the post-reform period. Apparently, behind this lies the basic characteristic of Chinese industrialization that remained as the underlying current even after the reform and opening-up, namely, the industrialization of state-owned enterprises as a key.

1.2.5 Price Fluctuations and Economic Changes

Since the late 1953, markets had been eliminated in China and they could not play an active role except in rural fairs (*jishi*). These markets were closed for a particular period in certain areas. Therefore, provided that the official statistics were used, prices were strictly controlled during this era of the planned system, no inflation occurred, and the prices of consumer goods were kept low to support the low income of peasants and low wages of urban workers. However, in the socialist planned economy, the economy was in a state of what János Kornai called a “shortage economy” (where demand generally exceeded supply). Hence, there was invisible, or the so-called, “repressed inflation,” which existed as rationed tickets and black markets. Although the scale of the shortage and/or illegal markets is difficult to estimate, it is almost certain that China did not have an “underground economy” on such a scale as was popular in the former Soviet Union.⁴

Conversely, the economic fluctuations during the Mao era were extremely large because of the major upheavals experienced during the GLF and CR. Based on the coefficients of variation (standard deviation/average), the coefficients of the Mao era were much larger than those of the post-reform era, both in terms of GDP per capita and annual growth rate. In particular, tremendous fluctuations during the GLF (Fig. 1.1) demonstrate how the economy was washed away by large waves during the Mao era (see Table 1.6).

1.2.6 Infrastructure Construction

Taking water supply, the total length of railways, and the total length of public roads as quantitative indicators of infrastructure construction, we can observe that the

Table 1.6 Trend of the coefficients of GDP variation

	GDP per capita	Annual rate of growth
1952–1957	0.054	0.058
1958–1965	0.143	0.153
1966–1977	0.071	0.072
1952–1977	0.092	0.097
1978–2008	0.026	0.025

Source Author's calculations based on Compendium (2005)

growth rate during the Mao era was higher than that after the reform and opening-up. Water supply in 1975 was 13.5 times greater than that in 1952, while in 2000, it was only six times greater than that in 1978. In the case of the total length of railways and public roads, the former was 2.1 and 6.2 times greater, while the latter was only 1.3 and 1.6 times greater. Clearly, the basic agricultural infrastructure, such as irrigation and flood control, was created under the Mao regime (see Chap. 6). Basically, infrastructure construction progressed at a considerable speed during this period, leading to the post-reform economic development.

1.2.7 Medical Care and Education

Let us consider the number of doctors and hospital beds per 100,000 population as quantitative indicators of the level of medical care and enrollment and graduation rates of primary school students, and the number of students in higher education institutions (mainly universities) per 100,000 population as indicators of the educational level of the population (see Table 1.7).

The following conclusions can be drawn from this table. First, the number of hospital beds increased rapidly during the Mao era, but although the number of doctors increased after the PRC was founded, it declined relatively during the CR and then increased again after the new policy of reform and opening-up started. This is due to the disruption of university education during the CR and the shortage of doctors.

Second, the school enrollment rate of primary school students increased remarkably after 1949 and reached the late 90% in the latter half of the CR, but it stagnated for a while in the post-reform era. This is also reflected in the number of primary school graduates and can be considered a reflection of the fact that, following the start of the new reform policy along with the booming economy, parents in rural areas used their primary school children as a necessary labor force to support their families. Therefore, the dropout rate of primary school students increased over time.

Third, the situation of students entering universities is completely different. During the CR, universities were closed, and university entrance examinations were suspended, so the proportion of university students in the population dropped significantly. In the latter half of the CR, universities were reopened, and the number of

Table 1.7 Development of basic medical care and education of primary schools

	Number of doctors	Number of hospital beds	Percentage of school-age children enrolled	Number of graduates of primary schools	Number of students enrollment by regular institutions of higher education
	Per 10,000 population	Per 10,000 population	%	10,000 persons	Per 10,000 population
1952	74	28	49.2	149	33.2
1957	81	46	61.7	498	68.2
1962	102	103	56.1	559	123.3
1965	105	106	84.7	667.6	92.9
1970	85	133		1652.5	5.8
1975	95	173	96.8	1999.4	54.2
1978	108	193	95.5	2287.9	88.9
1985	136	214	95.3	1999.9	160.9
1990	156	232	97.4	1863.1	180.4
1995	162	239	98.5	1961.5	239.9
2000	169	238	99.1	2419.2	438.8

Source Author's calculations based on Compendium (2005)

university students increased slightly. Nevertheless, after the post-reform era began, the rate of university enrollment and the number of universities increased drastically.

Hence, the characteristics of the level of medical care and education during the Mao era became clear. Although great achievements in basic medical care and education were observed, there were delays in higher education and advanced medical care. In summary, medical care and education in this period showed progress in terms of quantity, but they were inferior in terms of quality. This is because medical care and education were largely dependent on the educational policies of the time and political attitudes behind them. Such attitudes are typified by the priority given to medical care that served the masses and the strengthening of political education for intellectuals that repeated often under Mao's initiative.

1.2.8 Trade Dependence

Finally, let us look at the movement of trade dependence (total imports and exports/GDP) during the Mao era: trade dependence ratio, which was 9.5% in 1952, did not increase much thereafter, falling to 5% in 1970 during the CR and recovering to 9.7% in 1978 immediately after the new policy started. Moreover, during that

period, trade dependence never exceeded 10%. This had much to do with the fact that China's foreign trade during the period concerned was biased toward Eastern countries, and Mao Zedong stressed the importance of the self-reliance policy. However, after the reform and opening-up, China's foreign trade increased drastically, and the trade dependence ratio rose to 22.9% in 1985 and 39.5% in 2000.

1.3 Mechanisms of Growth and Structural Changes

On what model or strategy were the policies based and led to this pattern of growth and structural changes in the Mao era? Mao Zedong and other policy makers of his time probably based their policies on, at least, the following four models or basic strategies—of course, within the broad framework of the socialist planned economic system, specifically the system of public ownership and resource allocation by planning. These were (1) the Preobrazhensky model (hereinafter called P-model), (2) the so-called heavy industry-oriented development model derived from the P-model, (3) the closed (self-sufficiency) model that was also indirectly based on the P-model and the self-reliance policies for overcoming deficiencies derived from the above model, and (4) the politics-in-command (*zhengzhi guashuai*) model, which was unrelated to the P-model but Mao emphasized throughout his life, and the historical view of class struggle, which is closely related to the model of political priority. In the following section, we briefly summarize the substance of these models.

1.3.1 *Preobrazhensky Model*

In the Soviet Union, the first socialist regime on earth, the “Socialist Industrialization Debate” was fought fiercely between 1924 and 1927 over how industrialization should be promoted in a newly born socialist state. One of the Trotskyist theorists, Evgeny Preobrazhensky, first advocated the development of heavy industry (producer goods industry) and the necessity of transferring funds from agriculture to industry through price manipulation to make this possible. However, L.M. SP-hanin argued that agriculture should be developed first, and then foreign currency should be earned by exporting agricultural goods to import manufactured goods. Politically, Trotsky was defeated in a harsh power struggle with Stalin and was exiled, along with his colleagues. Preobrazhensky was banished to Kazakhstan, while Trotsky was finally assassinated in Mexico. After consolidating his power, Stalin changed his stance in promoting industrialization and accelerated the “agricultural collectivization drive from above,” as well as the P-model of prioritizing heavy industry.

Preobrazhensky roughly argued in the socialist industrialization debate as follows: Advanced capitalist countries could acquire funds for industrialization by owning and expropriating colonies, but the socialist Soviet Union could not do so. However, the Soviet Union has vast “rural colonies” within its borders and can transfer funds

to the government (industrial sector). As there would be a strong resistance from the peasants against taking away their food and other resources through taxation and requisition, it would be easier and better to transfer value from rural areas to the government by manipulating commodity prices. As the government can set all prices in a socialist planned economy, it can also transfer funds by deliberately undercutting the price of agricultural products purchased by the government and deliberately overcutting the prices of productive goods purchased by peasants⁵ (Preobrazhensky, 1967). To ensure that such a mechanism works well, the peasants should not be given the right to decide on their production and sales of products. Therefore, agricultural collectivization is an indispensable institutional precondition. In fact, in an attempt to adopt this model, Stalin forcefully promoted the “eradication of kulaks (rich peasants)” and the policy of agricultural collectivization, despite their fierce resistance since the end of the 1920s.

Despite the different methods of collectivization, Mao implemented a similar model in China in the early 1950s. He carried out the “unified purchase, unified sale (*tonggou tongxiao*)” and agricultural collectivization policies wherein private merchants were expelled from the countryside and the state monopolized the right to purchase, sell, and set prices for the three major agricultural products: food grains, cotton and oil crops (see Chap. 4). However, there is not necessarily a unanimous view on whether and how much there was a shear price difference between agricultural and industrial products in China and how much this contributed to industrialization finances.

1.3.2 Heavy Industry-Oriented Development Model

In the Preobrazhensky School in the Soviet socialist industrialization debate, Grigory Fel’dman advocated the strategy for allocating investment preferentially to heavy industries in a socialist planned economy to make the overall economy grow faster in the long run. Later, this strategy was formulated by Evsey Domar (known as the Fel’dman-Domar model; see Nakagane (2012) for more details). They proved that the higher the ratio of investment in the producer goods sector out of the total investment (investment allocation ratio), that is, the more investment is allocated to the producer goods sector, the more consumer goods can be produced eventually. However, the output of the consumer goods sector is initially lower than that of a policy with a lower investment allocation ratio.

However, at least the following three conditions were implicitly assumed for this model to be effective. (1) There would be no imports from abroad, (2) the productivity of investment and capital would remain constant, and (3) the government could make the people (consumers) patient with a limited level of consumer goods until those goods begin to be supplied enough. The original Fel’dman-Domar model was constructed in two industrial sectors: producer goods and consumer goods industries.

Certainly, the first assumption applies to China during the Mao era, as China was effectively a closed economy at that time, as we have noted previously. The third

premise is also valid. Rationing was imposed on peasants and urban residents, and the state restricted the supply of agricultural products, clothing, and other industrial consumer goods. However, the second assumption of constant productivity of investment is not necessarily true (see Chap. 8). This may be due to a planned economy because capital was not priced and consequently was not used effectively. Therefore, there was a tendency to accumulate capital (investment) in the industrial sector to the extent possible to fulfill the goals.

Regardless of the theoretical basis, however, this model of development that prioritized heavy industry was indispensable to the newly born revolutionary regime. This is because the defense of the regime and the nation was the most important issue for them. Hence, they had to increase their national defense capability, which in turn requires the heavy chemical industry, including particularly steel (see Chap. 8). During the Mao era, China was first threatened by the United States in the 1950s and then by the Soviet Union, alongside the United States, in the 1960s. Consequently, it never relinquished its heavy industry-oriented development strategy, although it emphasized the importance of agriculture and the light industry (see Chap. 2).

1.3.3 Self-reliance Model

As mentioned previously, the premise of the P-model was a closed economy, and the Soviet Union in the 1920s was surrounded by capitalist (imperialist, in their terminology) countries and was effectively a closed economy, making Shanin's model less effective in terms of the international environment. Similarly, Mao's China in the 1950s received Soviet aid and conducted trade mainly with the Soviet bloc, but its dependence on trade was remarkably low, and the country was actually self-sufficient. Moreover, exposed to military threats from abroad, especially with the intensification of the Sino-Soviet confrontation from the end of the 1950s, China leaned even more toward a policy of self-reliance to ensure its self-sufficiency.

The major difference between Mao's self-reliance and that of the Soviet Union was that he promoted a policy of self-sufficiency even in all domestic regions. The "Third Front construction" policy wherein factories were relocated from the coastal to the inland regions was also in line with this manner of thinking, as was the policy of "taking grain as the key link" (*yiliang weigang*), which was emphasized from the 1960s onward. This policy reflects the concept of guerrilla warfare developed and implemented by Mao during the revolutionary struggles. If each region had an independent, comprehensive, and well-organized economic system, even if the United States or the Soviet Union invaded China, some regions might be occupied, but other regions would be able to survive and continue to fight the invasion. In this situation, the most important goods are food grains.

1.3.4 Politics-in-Command Model

As discussed in more detail in the next chapter, Mao had no rational economics in his thinking: what he has in his mind was political economics with its discipline of “politics in command” (*zhengzhi guashuai*). The basis of this discipline was, in a sense, “non-orthodox” Marxism and historical materialism, which held that political struggles, or actually class struggles, could motivate people, consequently shaping the economic system and generating productive forces. Repeated political and ideological education movements, large-scale socialist transformation movements (e.g., agricultural collectivization), water conservancy construction projects by mass mobilization of peasants (see Chap. 6), and rural industrialization movements (see Chap. 10), plus the “Learn from Dazhai in Agriculture” and “Industry learns from Daqing” movements that celebrated spiritual uplift and self-reliance, all did so based on Mao Zedong’s notions.

These four models provide a basic framework for the economy of the Mao era, which may explain, to some extent, the characteristics of the economic performance of that period. Initially, the rate of industrialization of the economy especially that of the heavy and chemical industries, was consciously and systematically raised by the model of prioritizing heavy industry development. Therefore, severe economic fluctuations were caused by Mao’s politics-in-command model, ignoring fundamental economic principles. Meanwhile, whether the relatively low growth, even when it did occur, was due to the inappropriate functioning of the P-model or to problems regarding the productivity of capital, which was originally the premise of this model, cannot be determined. In contrast, the fact that the standard of living of peasants and urban workers was kept low for a long period of time seems to be a natural result derived from this model as well as the heavy industry-oriented development model. It is not surprising that the self-reliance model has reduced China’s dependence on external economies. However, the policy of increasing regional self-sufficiency has moved regional disparities in the direction of widening, rather than narrowing, as discussed in the previous section.

1.4 Institutional and Policy Context

To understand the major theses in the following chapters, we will briefly summarize, albeit very roughly, how the economic system and policies of the Mao era developed from the founding of the nation in 1949 until the start of the reform and opening-up policy in 1978.

1.4.1 New Democracy Period (1949–1953)

The main economic and institutional policies that characterized this period were the nationalization of foreign and Kuomintang (KMT) capital, the seizure and control of the private economic sectors, land reform and the mutual-aid movement in the countryside, and the creation of a planned economic mechanism as well as the launch of the First Five-Year Plan.

First, the post-founding Communist government worked to eliminate the powers of the KMT government in various fields such as industry, transportation, commerce, and finance. In addition to the 2,400 national and local banks run by the KMT government, the communists seized and took control of major private banks, nationalized 2,858 industrial enterprises with 1.29 million employees, and nationalized railroads, ships, and airlines in the area of transportation. Simultaneously, the government launched the “Three Anti’s and Five Anti’s” movements, which were more of a political liquidation than an economic policy, and proceeded to destroy the old regime and purge personnel in the government and private sectors of the KMT era (see Chap. 3 for details).

Land reform in rural areas had already been carried out before 1949 in the liberated areas controlled by the Communist Party, but after the new China was established, similar land reforms were carried out in the newly liberated areas, forcibly transferring land, agricultural capital such as livestock from the relatively rich peasant class identified as landlords and rich peasants to the poor peasants and farm laborers. Officially, it was announced that the land reform was carried out “in an orderly fashion,” denying a conventional wisdom that it was practiced often so violently that many landlords were killed, sometimes by “people’s trials” (Wu ed. 2009: 93). In reality, however, a huge number of landlords and rich peasants (classified as such) were killed during this movement.⁶

As a result of the land reform, how much land was handed over from landlords and rich peasants to poor peasants and hired workers? According to published statistics, before the land reform, 14.3% of the land was occupied by poor and farm laborers, 30.9% by middle peasants, 13.7% by rich peasants, and 38.3% by landlords. After the land reform, however, the land of rich peasants decreased to 6.4%, while that of landlords decreased to only 2.2%, indicating that most of the land was taken away from the landlords (Wu ed. 2009: 95).⁷

When the land reform movement ended, the movement of mutual aid teams (MATs), which are traditional organizations for labor exchange in rural areas, began in rural China, and attempts were made to spread the MATs throughout the country. This was the initial stage of the full-fledged agricultural collectivization.

Third, the planned economic system was established, and the five-year plan started. As a new socialist country that had just been founded, China was trying to learn from the Soviet Union in many respects. At that time, the prestige of the Soviet Union and Stalin as the victors of World War II was extremely high, and China introduced a system similar to the Soviet Union’s planned economic system. Specifically, the National Bureau of Statistics was established in 1951 and the National

Planning Commission in November 1952, and they were involved in formulating the First Five-Year Plan, which was to begin the following year. The centerpiece of this five-year plan was the introduction of 156 items of economic and technical assistance from the Soviet Union (see Chap. 8). The State Economic Commission was also created to administer annual plans. At the end of the same year, as will be discussed in Chap. 7, a banking management system was organized under the unified leadership of the People's Bank of China, foreign trade was placed under direct government supervision, and the right to manage foreign currencies was vested in the state.

1.4.2 The Period of Socialist Transformations (1953–1957)

Before 1953, the new democratic stage was thought to continue for a long time, and real socialization would be a distant prospect. But in mid-1953 when the economic recovery of 1949–52 was well under way and the Korean War, which had broken out in June 1950 and China had also been involved in, was coming to a ceasefire, at a meeting of the Central Political Bureau of the CPC of June 1953, Mao Zedong suddenly announced the “General Line of the transition period” to accelerate industrialization and, to this end, launched the “socialist transformation” policy to transform private ownership both in rural and urban areas. More specifically, this meant the collectivization of agriculture in the countryside, the transformation of private enterprises into joint public and private ownership in the cities, and the cooperativization of handicraft industries.

In October 1953, a policy was formulated for the spread of “Elementary Producer Cooperatives” in which land and agricultural capital remained privately owned, but production was to be carried out on a fully cooperative basis. Mao Zedong tried to accelerate collectivization by criticizing Deng Zihui, the head of the Party's Rural Work Department, who had dissolved many poorly organized cooperatives. In July 1955, Mao delivered a speech entitled “On the problem of agricultural collectivization,” which triggered a tremendous “tidal wave of collectivization” throughout the country, far beyond his expectations. By the end of 1956, almost all the farmers had joined “Advanced Agricultural Producer Collectives” in which both land and agricultural capital were collectively owned and the scale of the cooperatives was several times larger than that of the Elementary Cooperatives. Fueled by this movement, the transformation of private urban enterprises into joint public–private ownership and the cooperativization of handicrafts also progressed rapidly.

Another important movement in economic policy and institutions during this period was Mao's speech, “On Ten Great Relationships,” delivered at an enlarged meeting of the Political Bureau in April 1956 (see Chap. 2). It discusses ten economic and political relationships, including the relationships between heavy and light industries, between coastal and inland industries, and between economic and national defense construction. It is said to be a starting point from which China searched for its own way different from the Soviet Union's, stimulated by the shock of criticism of Stalin in the 20th Congress of the USSR Communist Party. It is also an important

form of speech that forms the basis of subsequent economic policies. For example, the doctrine of “agriculture as the key link (*nongye jichu*)” that was emphasized after the GLF and the decentralization of state-owned enterprises that was implemented in 1957 can be said to be based on this speech. In addition, under the policy of stimulating the “two positives” between the central and local governments proposed in the Ten Great Relationships, the large-scale transfer of central enterprises to the local governments, i.e., regional decentralization, was promoted (see Chap. 8).

1.4.3 *The Great Leap Farward Period (1958–1961)*

In the formulation of the Second Five-Year Plan (1958–1962), Mao Zedong, who had grown confident in the progress of agricultural collectivization, harshly criticized pragmatic leaders such as Zhou Enlai and Chen Yun, who were trying to adopt a realistic policy relying on the principle of “anti-rash advance (*fanmaojin*)” (opposition to the principle of “hasty progress”). At the CCP’s Nanning Conference in January 1958, Zhou and his colleagues admitted the “error” of their “anti-rash advance” stance, subsequently forced to criticize themselves before Mao. In November 1957, top leaders of the socialist countries gathered in Moscow to celebrate the 40th anniversary of the Russian Revolution, where Khrushchev, the first secretary of the Communist Party of the Soviet Union, expressed a grandiose idea that the USSR would “catch up with and overtake the United States” in 15 years. Simultaneously, Mao Zedong, who was leading the Chinese delegation, launched the idea that China would catch up with and overtake Britain in 15 years. Subsequently, this concept itself made a “great leap forward” more specifically, developed into an even more ambitious plan to catch up with Britain in seven years in terms of steel production, and to catch up with the United States in 15 years.

These movements spread from Beijing to provinces, then to the grassroots levels, inducing each government department and region to set exaggerated targets and to send exaggerated reports to the center that grossly misrepresented their achievements.

In August 1958, when the Party’s Beidaihe Conference was held to merge several Advanced Producer Collectives to form a huge rural community entitled People’s Commune with a population of tens of thousands. The Commune was formed under the slogan “combine industry, agriculture, commerce, schools, and militia (*gong, nong, shang, xue, bing*),” “integrate government administration with commune management (*zhengshe heyi*)” and “one township, one commune (*yixiang yishe*).” The People’s Commune was thus established nation-wide incredibly only in a month, in which almost all rural residents joined, whether actively or passively. This could be called another “Great Leap Forward” movement. Many communal dining halls were set up under the Communes, and this illusion and misunderstanding that a communist society was coming to arrive soon, where people could eat as much as they wanted for free (just in accordance with the communist principle: distribution according to need). In addition, the belief that food had been sufficiently produced as a result of the GLF movement led to the transfer of a large amount of agricultural labor to the

Table 1.8 Various estimates of non-normal deaths during the Great Leap Forward

Name of estimator	Year of publication	Period	Number of non-normal deaths (10,000)
Wang Weizhi ^a	1981	1959–61	3300–3500
Banister	1984, 1987	1958–61	2887
Coale	1985	1958–61	2697
Jiang Zhenghu	1986	1959–61	1700
Jin Hui	1993	1959–61	4060
Ding Shu	1996	1958–62	Below 3500
Li Chengrui	1997	1959–61	2200
Cao Shuji	2005	1958–62	3246
Ynag Jisheng	2008	1958–62	3600
Lin Yunhui	2009	1958–62	3000
Li Che	2012	1958–62	3457
Diköter	2015	–	4500

Source Added by the author based on Li (2012) Table 1. The original sources are omitted for brevity

Note Except for estimates by authors who doubt the occurrence of the great hunger and famines

^a Recited from Yang (2008)

industrial sector, thereby mini-blast or backyard furnaces were constructed all over the country, and a huge amount of labor force estimated to be 90 million people was injected into the steel production campaigns.

However, because of these excessive and poorly implemented institutional reforms and reckless policies, the economy fell into turmoil and the growth rate declined drastically, finally plummeted down to less than 25% even in official statistics (see Fig. 1.1). It is difficult to estimate exactly how many people died of starvation (non-normal deaths) nationwide from 1958 to 1962, and there are various estimates of deaths ranging from 17 to 45 million (see Table 1.8),⁸ but it is likely to have reached at least about 30 million as the average of those estimates implies. The number of people who died of starvation is said to have been particularly high in Sichuan and Anhui Provinces, followed by Henan and Hunan Provinces.

1.4.4 Adjustment Period (1962–1965)

To contain the chaos caused by the GLF and, above all, to restore agricultural production, Liu Shaoqi and Deng Xiaoping took the lead in implementing more realistic policies known as the adjustment, such as agricultural de-collectivization, e.g., land management under contract with individual peasants. Important state-owned enterprises were centralized again on the basis of the recognition that the decentralization of the economy promoted by Mao Zedong was one of the factors leading to economic chaos.

On the other hand, Mao, who sensed the danger of a “capitalist revival” brought about by pragmatic policies and the resulting loosening of society or the retreat of the People’s Commune system, launched a socialist education campaign, in which he excessively emphasized the importance of class struggle, and finally came into conflict with Liu Shaoqi who actually led this campaign. Simultaneously, he developed the “Learn from Dazhai” movement, claiming that a poor production brigade located at Dazhai village in Shanxi Province had recovered from the disaster through self-reliance and was leading the members to collective production without relying on material incentives. He called on the whole country to learn from the spirit and style of this model brigade, so that Dazhai became a sacred village in the socialist countryside visited by many peasants from all over the country.

Another important policy put forward by the government during this period was “Third Front construction” (see Chaps. 8 and 11). Fearing that the United States and the Soviet Union might launch military attacks on China, Mao Zedong sought to decentralize the placement of factories and promote regional self-sufficiency from a national defense perspective by relocating factories from coastal to inland areas and investing in industry mainly in inland areas.

1.4.5 The Cultural Revolution Period (1966–1976)

The time had originally come for the Third Five-Year Plan (1966–1970) to begin, but Mao Zedong launched the CR to overthrow Liu Shaoqi, Deng Xiaoping, and as a result, China’s politics and society fell into unprecedented chaos. The Party and administrative organs ceased to function for a time, the planning mechanism stopped working, and the economy suffered a major blow. However, as we saw in Sect. 1.1, it did not have the same impact as the GLF, and the Chinese economy grew to a certain extent despite the CR turmoil.

The following economic institutions were newly created during the CR: first, the development of enterprises run by the people’s communes, as well as production brigades and local industries at the county level (see Chap. 10 for details). The second is the decentralization of the economy. Regional enterprises that had been recentralized to the center during the adjustment period were re-decentralized between 1969 and 1970. Large enterprises, such as the Daqing Oil Field and Changchun Automobile Factory, were also sent to the provinces. As a result, there remained only 500 central enterprises, a decrease of 86.5% from 1965, and their industrial output value accounted for only 8% of that of state-owned industrial enterprises (Wu ed. 2009: 529). Further, basic construction investment began to contract out to localities, and this decentralization contributed to the development of local industries, as described above.

Regarding economic policy, the “Learn from Dazhai” movement expanded further, moreover, learning from Dazhai some rural areas abolished private plots, banned family side jobs, and restricted rural free markets. Meanwhile, in the later stages of the CR, Deng Xiaoping revived and replaced by Zhou Enlai at the helm of the economy. As relations with Japan and other Western capitalist countries improved, the policy of importing industrial plants from overseas was adopted, and this policy was implemented in the subsequent opening-up era (see Chap. 8). Jiang Qing and the Gang of Four, probably in fact Mao himself, too, insisted on the continuation of the politics-in-command CR dogma and tried to oppose the pragmatic economic strategy pursued by Zhou Enlai and Deng Xiaoping, who strove to reconstruct the economy that had been damaged by the CR. However, their anti-reform attitude and policies were nothing but an ephemeral boom of the last stage of CR politics, which disappeared without a trace following Mao’s death and the downfall of the Gang of Four in October 1976.

Conclusion

With the establishment of the restored power of Deng Xiaoping at the Party’s Third Plenum of the Eighth Congress in December 1978, China embarked on a new economic policy of reform and opening-up and transitioned to a marketization and privatization system that was actually capitalist. The People’s Commune, which Mao had clung deeply, was demolished, and the individual farming system was revived. Special Economic Zones were created to actively attract foreign capital and expand foreign trade. These paths were created under the leadership of Deng, who was known in China as the “general architect of reforms.” However, he did not precisely set the direction of reform from the beginning of this era, but transformed the system by selecting policies in a gradualist and pragmatic manner.

Naughton (1995) declares that the partial introduction of the market mechanism resulted in the opening of a hole in the dike of planning, which gradually became increasingly large, leading to the collapse of the entire planning system. Basically, the market created by itself the systemic transition path as a natural process, rather than to say that a political leader called Deng Xiaoping drew up an elaborate blueprint for the entire systemic reform. However, it was exactly Deng who created the impetus for the transition and certainly regulated the marketization trend from time to time. In particular, his 1991 “Southern Tour” speech had a profound impact on the explosive marketization of the economy that began in 1992. In this speech, he addressed “Capitalism has also a plan, socialism has a market, too” and hence developed the theory of the “socialist market economy.” Thus, a type of state capitalism or developmental dictatorship was established wherein the political system remained a one-party dictatorship while the economy was market-oriented. Additionally, people began to become united for profit and money. Around this time, ordinary people began to feel happy and/or sad about the daily price movements of the newly introduced stock markets. This wave of marketization spread to various sectors of the society,

and consumer prices, which were controlled during the Mao era, were largely liberalized. Further, the rural labor force became active, and private enterprises sprung up like mushrooms after a rain.

With such a historical trend, we cannot help but wonder what the Mao era was all about. Was it merely an experiment in a failed socialist planned economy? Was it just an era of madness, driven by a singularly charismatic leader, Mao Zedong? Was it a period of futility that followed a circuitous route to capitalism? Or was it a time when China was preparing for the leap forward after the new era of reform and opening-up? Let us reconsider what China did during the Mao era and what significance this might have for post-reform China. The following chapters attempt to provide a tentative answer to these questions.

Notes

1. This section is based on the paper “Did the Chinese Economy Grow during the Mao Era?” presented at the 2020 Spring Meeting of the Japan Association for Asian Studies (in Japanese). I would like to express my gratitude to my co-author, Mitsunami Kohei, assistant professor at Teikyo University, for his cooperation.
2. His report at the Japan–China Academic Workshop on “Assessing Economic Institutions and Policies in the Mao Era” held at Toyo Bunko (Oriental Library) in February 2014. His institute (i.e., Unirule Institute of Economic Research in Beijing), which had been an influential base of reformist economists in China, had to close its door in 2019 due to obstinate political pressures by public authorities.
3. During the Mao era, foreign trade and capital inflows from abroad (e.g., aid and investment) were minimal. Hence, given the slower rate of consumption growth, the only growth factor remaining was domestic investment.
4. The rationale for this is that China was “young” in that social controls were tighter and its experience of a socialist-planned economy was shorter than that of the Soviet Union. Clearly, from many information sources, small-scale black markets for food grains existed even during the Mao era (e.g., rationed food coupons and other items). However, unlike in the former Soviet Union, Chinese urban workers did not work overtime using factory materials and machinery to sell the products in the black market.
5. When the price of industrial goods rises and that of agricultural products stagnates or falls, the difference between the two prices naturally widens, which is called a “price scissors” (*jiandaocha*).
6. Gao Wangling says that 3–5 million people lost their lives in the process of land reforms, the majority of whom were small and medium landowners and were beaten to death (Gao, 2013: 6). There are quite a few other sources that report the human sacrifices of landowners and those who were regarded as “landlords”. See Song (ed.) (2019) for more details.
7. In fact, whether the landowners owned nearly 40% on average of the arable land before the land reform is unknown.
8. Most of the “non-normal deaths” are starvations, but they also include deaths from diseases caused by malnutrition or suicide due to despair.

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