A Chinese Social Structure of Accumulation for Capitalist Long-Wave Upswing?

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Abstract

The objective of this article is to examine whether China has a viable macro social structure of accumulation (SSA) for capitalist long-wave upswing into the early decades of the twenty-first century. The article commences with the SSA index of performance and potentiality (IPP) through which phases of capitalist development can be scrutinized. The rest of the article details the components of the IPP, first the more technical institutional factors and then broader indicators of development. The article concludes that China is currently an emerging capitalist economy and that it is likely to continue through long-wave upswing through core industrialization during the next fifteen years. There are critical limits to capitalist development in China—including problems associated with capital productivity, innovation, pollution, and rural-urban dynamics—and these are likely to restrict long-term performance by about 2020.

JEL classification: *B50; E11; N15; 011; P16*

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1. Introduction

China has been integrating into the capitalist world economy during the past twenty-five years through joining various global organizations, encouraging foreign direct investment, enhancing market relations, and promoting capital accumulation. Indeed, in some respects it seems that China is one of the few success stories in a world where most continental engines of growth have faded. For instance, most of Europe, North America, South America, sub-Saharan Africa, Eastern Europe, and the Middle

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East have been in relative economic malaise (O'Hara 2006). Could China and its archipelago be the main engine of growth for the world economy to inspire growth and accumulation? Although most areas of the world suffer from poor performance, could China be undergoing a capitalist long-wave upswing? This is the subject matter of the current article.

2. SSA Index of Performance and Potentiality

I start the analysis by outlining the SSA index of performance and potentiality (IPP) dealing with both *technical* and *general* institutional factors, because I recognize, as Gordon (1998) did, that both are crucial to long-term socioeconomic performance. This index has ten variables, and each is worth a potential 10 points, giving a total of 100 points. I try as much as possible to avoid double counting, and I include an array of factors critical to long-term development. Also, I try to situate the index in different phases of capitalist development to incorporate an evolutionary dimension to the task. Critically also, I differentiate between the actual performance of the institutions and their potentiality through medium-term historical time, typically around fifteen years (because beyond that is difficult).

First, I situate the IPP within the context of the following five phases of capitalist development that capitalist nations or areas may undergo throughout time, on the basis of a thorough investigation of the ten areas of analysis.

Phases of capitalist development associated with the SSA IPP:

1. Underdeveloped economy (0-20 points)
2. Emerging economy (21-40 points)
3. Main industrializing economy (41-60 points)
4. Maturing power (61-80 points)
5. Highly advanced economy (81-100 points)

These five phases are based on an analysis of ten variables, which are partly quantitatively and partly qualitatively applied to China, given a scale of 1-10 for each variable. On the basis of a detailed knowledge of the Chinese economy, a summary of the index is shown in table 1, to be followed in the rest of the article by a detailed scrutiny of the variables. The more positive variables are on the left-hand side; the less positive—*relatively speaking*—on the right.

It remains for me to analyze the technical and qualitative evidence for, and explain the main results of, the variables. A succinct summary of the index, first, tells us that China currently achieves a value of 37/100, which means that it is in the upper reaches of an "emerging economy" (phase 2). It also tells us that, given our current knowledge of China's potentiality in the ten areas, in the medium term (during the next fifteen years) it has the potential to rise to higher reaches of "main industrialization" (phase 3), with 58/100 points. What this implies is that currently China is in a long-wave upswing because it is undergoing a metamorphosis into the higher reaches of an "emerging economy," and that in the next couple of decades, it is likely to continue into long-wave upswing through "main industrialization."

Table 1
SSA Index of Performance and Potentiality (IPP), 2002-2003, 2020

Variables	Actual Value 2002-2003	Potential Value 2020	Variables	Actual Value 2002-2003	Potential Value 2020	∑ Actual Values 2002-2003	∑ Potential Values 2020
Labor productivity	5	7	Capital productivity	1	3		
Investment	5	7	Innovation (R&D)	2	3		
Global power	5	8	Pollution	2	3		
Markets	5	8	Standard of living	4	6		
Rural → Urban	4	7	Governance	4	6		
	24/50	37/50		13/50	21/50	37/100	58/100

3. Chinese SSA Performance: (A) Technical Institutional Factors

China has gone through a number of socioeconomic developments since the revolution. This started with industrial rehabilitation (1949-1952), then the foundations of industrial development during the first five-year plan (1953-1957), followed by the backward movement of the Great Leap Forward and Cultural Revolution (1958-1976), and finally the market-oriented reform period (1978-present). Before the reform of 1978, the Chinese political economy centered on the communal system of production and state firms, along with centrally planned and controlled structures. Since 1978, major reforms have been made to turn communes and state enterprises into private companies, open up the country to foreign trade and capital flows, and encourage competition, investment, and private property relations. Technical economic variables such as growth, investment, and labor productivity have expanded rapidly since this time, as shown in table 2.

In table 2, it can be shown that real GDP growth per capita was subdued in the 1960s under the influence of the Great Leap Forward and Cultural Revolution; recovered somewhat in the 1970s; and then, during the 1980s, 1990s, and 2000s, has been an impressive 7-8 percent growth rate per annum. This is a really remarkable transformation for China. Statistics are less forthcoming for the investment share of GDP, but what is obvious is that it rose from around 36 percent of GDP in the 1970s to 41 percent of GDP in the early 2000s. There has been a reorientation from agricultural to manufacturing investment during this period. Productivity per worker in the manufacturing sector experienced the largest growth, from a 2.6 percent average in the 1970s to 3.18 in the 1980s, 7.30 in the 1990s, and then 13.3 in the 2000s. This is a rapid metamorphosis of industry for the most populous nation on Earth.

Much less significant inroads have been made into areas such as research and development, high-technology products, and innovation, as shown in table 3. The data in table 3 show that China's position in the high-technology area has expanded rapidly in a decade. Relative to the United States, its R&D position has doubled, as have high-technology exports relative to manufactured exports; its European patents have grown more than thirty-fold relative to those of the United States. This is an advance, although it has to be

Table 2
Macroeconomic Conditions, 1961-2003

	1961-1970	1971-1980	1981-1990	1991-2000	2001-2003
Real GDP growth per capita (average annual)	1.48	4.22	7.42	8.56	7.14
Investment share of GDP	n.a.	35.7[a]	35.47	38.40	41.14
Labor productivity in manufacturing (value added per worker; average annual)	n.a.	2.60	3.18	7.30	13.3

Source: Adapted from Holz (2005: 25), Yu (2005), Bernstein Research Group (2005), and Goldstein (2005).
a. 1978-1980.

emphasized it is not that impressive because the figures start from a very low base, and China's comparative advantage is not yet in the high-technology field. China's comparative advantage is in low-technology goods. It does, though, play a role in exporting some relatively high-technology goods, especially radios, televisions, and communications equipment, and increasingly also office and computer equipment. But typically, it imports electronics components—such as integrated circuits, memory and controller chips, central processing units, and semiconductors—while it exports the final computer, communications, and audio equipment after assembly in China (Katsuno 2005: 19).

Its proportionate export/GDP of the typically high-profit pharmaceuticals, scientific instruments, and aircrafts has diminished steeply between 1992 and 2001. While its information and computer technology (ICT) patents as a proportion of total patents have increased during 1991-2000, the biotechnology patents proportion has declined significantly. It has also to be said that there is a poor protection of intellectual property rights in China, the quality of its research and development workers is generally low, and the financial-industry nexus for innovation is in a low stage of development (Schaaper 2004).

It is necessary to elucidate the basic political economy processes underlying China's growth and development. More specifically, we need to know about the economic surplus, rate of exploitation, organic composition of capital, and rate of profit. What strategy is in place to generate potential movement during the next fifteen years? Table 4, below, summarizes these variables in the context of China's past few decades since the reform started in 1978.

Studying the trends and nature of these variables reveals a quite obvious process of development. The Chinese authorities have set in motion a style of social capitalism, in which it has encouraged competition, globalization, and the expansion of capital accumulation. It has used the capitalist mode of production and reproduction to stimulate industrialization in the context of a high degree of competition of Chinese products on the world market. Expanding capital accumulation, and thus raising the share of investment in GDP to more than 40 percent, raises labor productivity to successively high levels.

This has the ramifications of reducing the rate of profit from the previously very high rate of 47 percent to the still high (in global terms) but moderate (by Chinese standards) rate of

Table 3
China's High-Technology Advances Relative to United States, 1991-2002

	1991	1997	2002
R&D as % of GDP (China/United States)	0.27	0.27	0.47
High-tech exports as % of total manufactured exports (China/United States)	0.33[a]	0.51	0.63[b]
Patents granted by European Patents Office (China/United States)	0.00166	0.00375	0.107

Source: Adapted from Schaaper (2004: 17, 47, 72).
a. 1992.
b. 2001.

Table 4
Rate of Economic Surplus, Exploitation, Organic Composition of Capital, and Profit: China, 1978-2002[a]

	1978	1984	1990	1996	2002
Economic surplus/GDP	0.32	0.28	0.25	0.24	0.24
Rate of exploitation (s / v) × 100	56%	46%	40%	39%	41%
Organic composition of capital (c / (c + v)	0.16	0.16	0.18	0.20	0.24
Rate of profit (s / (c + v)) × 100	47%	40%	33%	32%	32%

Source: Adapted from Holz (2005: 29).
a. The data in table 4, including the economic surplus, organic composition of capital, rate of exploitation, and rate of profit, are all estimated from the national accounts data. The economic surplus, for instance, called "operating surplus" in the national accounts, is defined as "a residual" and "reflects economy-wide business profit." It is "the return to the owners of the capital involved in a productive activity, and thus constitutes [in principle] the economy-wide return on equity." Furthermore, "surplus constitutes the return on" "fixed and intangible assets." The rate of exploitation is defined as the ratio of economic surplus/GDP divided by the ratio of labor share/GDP (see Holz 2005). The organic composition of capital is here specifically defined as the depreciation proportion of GDP divided by the depreciation and wages proportions of GDP. It does not include circulating capital but, nevertheless, is thought to be a good indicator of the trend direction of the organic composition of capital.

around 32 percent. John Knight and Shi Li (2005) pointed out that during the period of central planning, the state-owned enterprises were "highly profitable" because they used a price-scissors policy of "keeping industrial prices high and agricultural prices low to finance industrialization" (206). But during the period of reform from 1978 onward, greater competition reduced margins and cut profit rates in both state and many private firms. The profit rate was reduced through the incessant expansion of capitalist production, especially the continual investment and replacement of labor by capital in the ongoing process of global competition. Substituting capital for labor raises labor productivity, but it also reduces the productivity of capital through the "Marx effect," because the rate of investment rises faster than GDP. The higher capital-labor ratio translates into a higher organic composition of capital, which thus reduces the rate of profit, along with the decline in the rate of exploitation. Chinese enterprises are, in this sense, poorly managing their capital investments and relying more on accumulation and substitution of labor rather than capital improvements per se. (See Fan and Felipe 2005.)

4. Chinese SSA Performance: (B) General Institutional Factors

The general institutional tendencies, despite contradictions, generally support long-term growth and accumulation at least into the foreseeable decade and a half. First, the People's Republic of China is building institutions to succeed in the power stakes of the global political economy. Soon after official recognition by a number of nations in the early 1970s, and gaining a seat at the UN, China began its reform agenda. In 1980, it successfully joined the International Monetary Fund (IMF) and World Bank, casting Taiwan into the diplomatic wilderness, and has been active in the Asian Development Bank since 1986. It went on to join the World Trade Organization (WTO) in 2001 and signed the Kyoto Protocol in 2002 (but, being a developing country, it has been under no obligation to reduce greenhouse gases). By the new millennium, it had joined all the major international institutions and agreements, as well as the informal G-20, in which it seems to mediate between developing and developed nations (Yu 2005).

Second, the potential growth of the domestic Chinese market is enormous. As China's middle class expands and urbanization spreads, the growth of the domestic market creates enormous potentiality for growth and accumulation. The development of market capitalism in China has seen the generation of exchange relations in most areas of socioeconomic life. Commodity markets, for instance, have expanded tremendously during the past twenty-seven years. The percent of producer goods transactions conducted at market prices has increased from 0 percent (1978) to 13 percent (1985), 46 percent (1991), 78 percent (1995), 86 percent (1999), and 87 percent (2003), whereas the percent of retail sales marketized has expanded from 3 percent (1978) to 34 percent (1985), 68 percent (1991), 89 percent (1995), 95 percent (1999), and 96 percent (2003) (Organization for Economic Cooperation and Development [OECD] 2005). China in general has expanded along the route of market society quite dramatically since the reform process started in 1978, and the potential for greater "economic freedom" in the capitalist sense is quite large, especially in relation to credit, labor, and business; capital flows; size of government; and property rights.

Third, along with the rise of the labor market and the slow easing of restrictions on the flow of people, there has been a tumultuous process of surplus labor moving from the rural areas to the cities and urban areas. The process of Chinese capitalism creating the foundations of a class of wage laborers and capitalists depends largely on the process of movement of population from rural to urban areas. There will likely be considerable scope for more rural-urban migration because some estimates put the surplus workers (hidden unemployment) in the agricultural sector at 150 million people (Brooks and Ran 2004: 27), whereas others put it as high as 200-300 million (OECD 2002; Carney 2004-2005: 53). Assuming the more conservative figure of 150 million and no major changes in the future, the movement of potential workers from the rural to urban areas may be relatively exhausted in 15-17 years. This is based on the analysis of Yongding Yu (2005: 15), who argued that 8-9 million jobs can be created with a growth rate of 9 percent. If this were the case, then this variable would generate major limits by 2020-2022.

Fourth, the standard of living of Chinese people is rising but somewhat limited. Overall, China's GDP per capita has quadrupled since the reforms commenced to US$5,600 in 2004 (purchasing power parity, or PPP; Central Intelligence Agency 2005). Unsurprisingly, though, since the reforms, income inequality has increased throughout China, as the growing regions

and sectors have exacerbated differentials. The new economic areas and powerhouses of Chinese growth have been rising rapidly, whereas many rural and old industrial areas have suffered from population exodus and industrial change and dislocation. Inequality for China as a whole has increased from a Gini coefficient of 33.3 (1986) to 40.3 (1998) (Uchimura 2005: 8). Population-weighted interregional inequality has expanded from a Gini of 2.13 (1980) to 2.48 (1999) (Milanovic 2005: 24). There is greater inequality within rural than urban areas, because some "rural" areas have towns and smaller cities that are flourishing. Also, recent evidence suggests that the limits on employment are far greater than formerly assessed (Giles, Park, and Zhang 2005).

Fifth, there are more serious limits to growth and development from environmental problems in China. Environmental pollution is a major cost to the Chinese economy from death, disease, and destruction of species habitat. Some estimates have put the welfare costs of pollution between 3 and 8 percent of GDP (OECD 2005), and another of damages worth 8 percent of GDP (OECD 2001) per annum. Taking the earlier cost estimate midpoint of 5.5 percent of GDP, and assuming it to be relatively uniform throughout time, substantially questions China's growth rate of per capita GDP as an indicator of welfare, given such revised figures for welfare of GDP growth of around 8.56 percent minus 5.5 percent (pollution costs) = 3.01 percent expansion of socioeconomic welfare (e.g., the index of sustainable economic welfare, or ISEW) for 1991-2001 and 2.64 ISEW growth for 2001-2003. This is ignoring changes in levels of stress, work travel time, household activities, and a host of other factors that the ISEW usually considers. Such costs are second nature to capital accumulation and in principle will not start to severely affect such institutions and tendencies for fifteen or twenty years.

Last, despite problems, it has to be said that the Chinese system of governance is evolving relatively efficiently. For governance to work as effectively as it has through such tumultuous rural-urban, public-private, and control-market transformations is really remarkable. The Chinese system of governance has been through institutional changes that have been effective and robust in supporting the accumulation process while trying to provide basic public goods. Rather than risk wholesale changes to its political process, it has taken the evolutionary course and up to now has succeeded. But it does appear that the system in motion does not resemble socialism but perhaps a form of *social capitalism* in which the dominant sectors are privatized and marketized while certain public goods are instituted to protect some externalities and common problems, and centralized political processes remain intact.

5. Conclusion

Despite numerous problems, long-wave upswing does both seem to be in motion and seem likely to continue throughout the medium term in China. China is undergoing capitalist development of a medium level through the emergence of markets, private property, and fewer controls by government. Contradictions may emerge such as the ones discussed, and also the potential dominance of finance over industry and capital over labor, but overall China seems to be undergoing a robust growth, accumulation, and development process of a sustained nature. A macroeconomic social structure of accumulation, on balance, does indeed seem to be operating at present throughout the Chinese political economy.

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