Comment on "Industrial Policy: Can We Go Beyond an Unproductive Confrontation?" by Ha-Joon Chang

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The topic for this session is extremely timely, given the global economic and financial crisis, which, I believe, shows that many policy makers got the economic and financial policies desperately wrong. As I was reading Chang's paper, I wondered whether he was advising President Obama or whether President Obama's new industrial and policy directives are helping to justify Chang's propositions concerning industrial policy.

Chang has three objectives in his comprehensive paper. First, he explores both sides of the industrial policy debate, revealing its successes and failures, but still showing his bias toward the proponent side. Second, he critically examines many of the key issues in the debate, including (1) whether targeting particular industries is a desirable industrial policy, (2) whether the state can ever beat the market, (3) implementation issues, (4) performance indicators, emphasizing the importance of exports, and (5) the need to combine free trade, export promotion, and infant industry protection. Third, he discusses the evolution and current changes in global rules of trade and investment. Although I agree with many of his arguments, I hope that analysts will go beyond industrial policy to study carefully the related issues of ecological, energy, environmental, poverty, and regional policies.

First, I review some of the key myths that Chang tries to knock down, referring not only to his paper for this conference but also to his comprehensive book on the topic (Chang 2002) and several of his recent papers. Then I expand the spatial horizon to include China in greater depth than he does, partially based on my 24 years of working in China, recently on the coke-making sector (Polenske 2006), and review the growth rates of East Asian countries. I end by posing some questions relevant to the global economic turmoil and prospects for industrial policies in the future.

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In all the countries he covers, Chang (2002, 2008) notes the important role played not only by targeted industrial policy, but also by education, government support, physical infrastructure, such as roads and railroads, research and development, and skill formation. He extensively discusses Britain, France, Germany, Sweden, and the United States as well as the East Asian region.

He reminds us of the way in which several important early political economists, such as Daniel Raymond, Matthew Carey, and Henry Carey (Matthew's son) have been "airbrushed out of the history of U.S. economic thought" (Chang 2002, 31). I do not remember those names in the many fascinating economic history books that Professor Alexander Gerschenkron had us read at Harvard University in the 1960s, including his own book *Economic Backwardness in Historical Perspective* (Gerschenkron 1962). I did experience such "airbrushing" in person (on a different topic) when I worked on the eighth edition of *The Theory of Monopolistic Competition* with Professor Edward H. Chamberlin (Chamberlin 1962), who had published his first edition in 1933. Chamberlin proudly produced as many editions as Alfred Marshall's well-known theory book *Principles of Economics* (Marshall 1920). I am probably the only one who knows that in the eighth edition Chamberlin deleted key passages from the preface to the seventh edition in which he had taken Joan Robinson to task for her book *The Economics of Imperfect Competition* (Robinson 1933). When I questioned this deletion, his simple reply was, "I have won that argument," and he was not bothered that he was deleting something from a previous preface, which, of course, he could not do in reality, but only in the published eighth edition.

Also, relevant to today's session, I note that Marshall worked for several years on a second volume, which was to cover foreign trade, money, taxation, trade, and collectivism. It is interesting to speculate on whether such a volume would have influenced the industrial policy debate as much as his texts *Principles of Economics* and *Economics of Industry* (Marshall 1919, 1920) still influence economic analysts. Piore and Sabel (1984) reintroduced us to Marshall's *Economics of Industry* in their book *The Second Industrial Divide*.

Chang's Explosion of Myths

In his paper, Chang extends and expands on his earlier writings on industrial policies in important ways. Even so, I found it useful to review his 2002 book *Kicking Away the Ladder,* in which he carefully explodes several myths concerning industrial policies and related economic development by providing extensive documentation of growth rates and tariff policies in several key Western countries as well as in Japan and a few other Asian countries. Although I agree with many of his arguments, I raise in the conclusion several unanswered questions.

The main myth examined by Chang is that free trade, rather than labor and capital mobility, is the key to global prosperity. As Chang (2003) says, historically, the current industrialized countries, such as the United States and Britain, "promoted their national industries through tariffs, subsidies, and other measures" rather than

by abandoning interventionist policies as advocated by neoliberals, who emphasized the virtues of small government, laissez-faire policies, and open international trade policies.

Chang (2002, 17) presents a convincing table from Bairoch (1993) in which the manufactured product tariff rates for the United Kingdom and the United States in 1820 are shown to average 45–55 and 35–45, respectively, in percentage of value. For the United States, these rates remained high until 1950, but even then, they were 14 percent—hardly the free trade environment that some analysts seem to feel existed. Up to the 1900s, tariff protection was an important policy tool (more important than today), because of the limited scope of state intervention and because most countries did not have an income tax, did not have a central bank, and owned or regulated few financial institutions and industrial enterprises. In addition to countering those who argue for free trade, Chang (2008) also challenges the proponents of balanced budgets and private ownership.

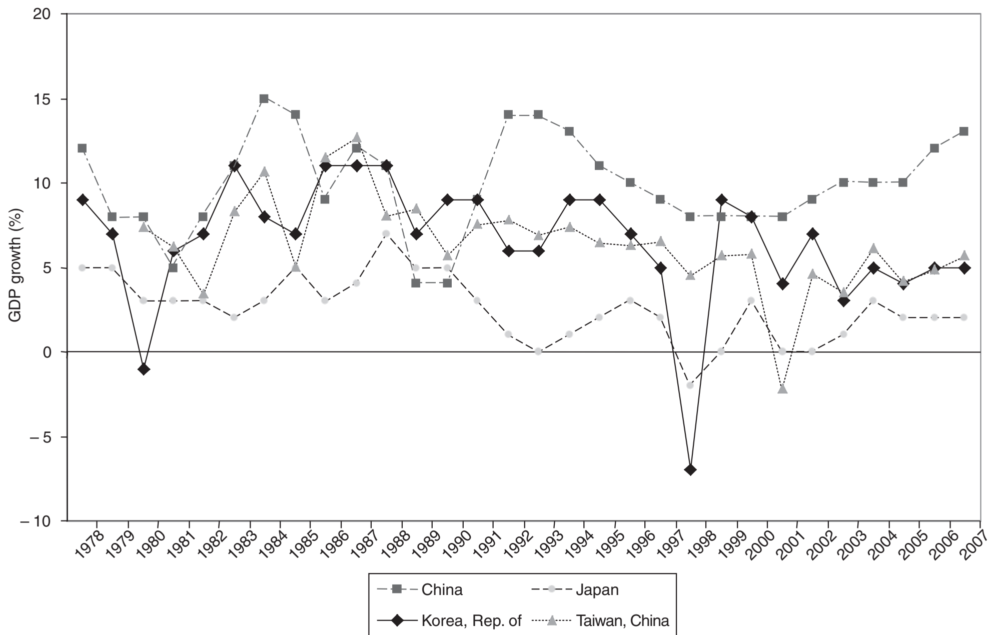
China

To understand the full relevance of the protection argument, I suggest examining other large countries, such as Argentina (especially the work of Beatriz Nofal), Brazil, India, and China. Given the limitations of time and space and my own 24 years of work in China, I provide a few brief insights into that economy. Figure 1 gives the growth rates of China compared with Japan, the Republic of Korea, and Taiwan, China, from 1978 through 2007. Although all four economies experienced noticeable growth, China stands out as the economy with the highest average annual growth rate, 10 percent during this period (see table 1). Korea and Taiwan, China, follow China with an average growth rate of 6 percent a year. Japan's average annual growth rate is 2 percent, lower than that of the other economies.

Except China, all of these economies experienced some negative growth during this period. For instance, Korea had an economic downturn in 1980 and again in 1998, with gross domestic product (GDP) growth rates of –1 percent and –7 percent, respectively. Japan had the same situation in 1998 when its GDP growth rate was –2 percent. These negative rates might have been caused by the Asian financial crisis at that time. Taiwan, China, suffered from negative growth in 2001, when GDP declined 2 percent. Compared with these countries, China maintained a strong and steady GDP growth rate, with the lowest rates occurring in 1989 and 1990, when they hit only 4 percent, largely attributable to the tragic incident in Tiananmen Square.

For China, from 1978 to 2007 (the years for which data are relatively readily available), the GDP growth rate averaged 10 percent and was never below 4 percent, according to data from the World Bank. This fact counters many economists who predicted a sluggish rate of growth due to a large number of factors, including lack of private property rights and other institutions and domination of state-owned heavy industries. Jeffrey Sachs and others encouraged China in the 1990s to do away with the trade restrictions, but China, I think fortunately, ignored this and other neoliberal recommendations. China's GDP growth rates were as high as 14–

FIGURE 1.
Annual GDP Growth Rate in Select Asian Economies, 1978–2007



Source: For China, Japan, and Korea: the World Bank, World Development Indicators online, accessed through Massachusetts Institute of Technology (MIT). For Taiwan, China, International Monetary Fund, *World Economic Outlook*, 2008 (http://indexmundi.com/taiwan/gdp_real_growth_rate.html).

Note: For China, Japan, and Korea, constant 2000 U.S. dollars. For Taiwan, China, constant new Taiwan dollar (the base year was not specified); data are not available from this source for 1978 and 1979.

TABLE 1. GDP Average Growth Rates for Select Asian Economies, 1978–2007

Economy	Average GDP growth rate (%), 1978–2007
China	10
Japan	2
Korea, Rep. of	6
Taiwan, China	6[a]

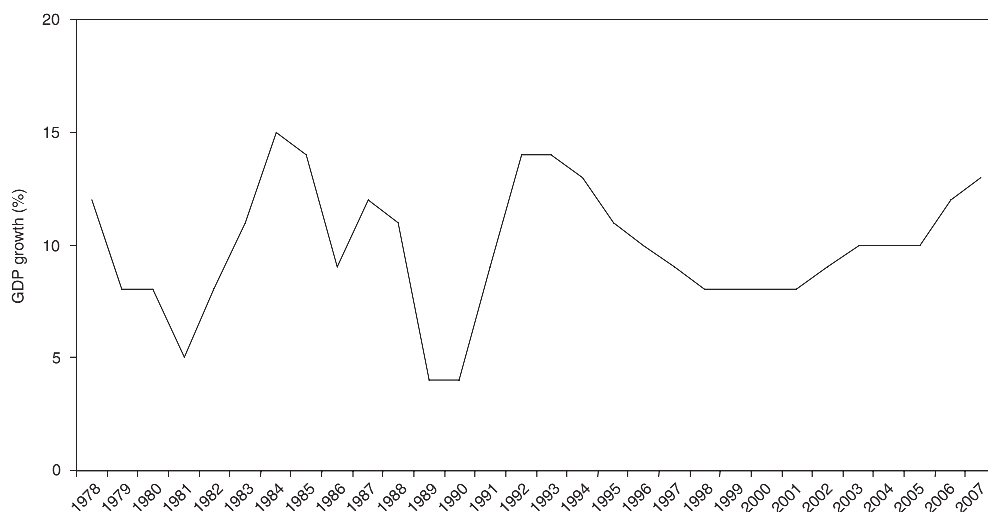
Source: For China, Japan, and Korea: the World Bank, World Development Indicators online, accessed through Massachusetts Institute of Technology (MIT). For Taiwan, China, International Monetary Fund, *World Economic Outlook*, 2008, accessed at http://indexmundi.com./taiwan/gdp_real_growth_rate.html.

a. 1980–2007 average.

15 percent during 1984, 1985, 1992, and 1993, with the lowest rates (4 percent) occurring in 1989 and 1990 (see figure 2).

The Asian financial crisis did have some impact on the Chinese economy, which can be seen in figure 2, with GDP growth staying at 8 percent during 1998 through 2001, a figure that is still significant compared to the performance of other economies. Rosen and Houser (2007, 9) state, “Between 1978 and 2000 the

FIGURE 2.
Annual GDP Growth Rate in China, 1978–2007, Using Constant 2000 U.S. Dollars



Source: World Bank, World Development Indicators online, accessed through MIT.

Chinese economy grew at 9 percent, while energy demand grew at 4 percent. After 2001, economic growth continued apace, but energy demand growth surged to 13 percent a year. It is this fundamental shift in the energy profile of China's economic growth that has created shortages at home, market volatility abroad, and questions about the sustainability of China's trajectory."

As Chang states in a *Financial Times* op-ed piece (Chang 2008), "If back in the late 1970s it [China] had gone headlong into free trade, rather than a gradual opening-up, it would not have grown at the pace that it has (its economy could have even collapsed in the way that many poorer former Soviet economies did). However, as a result of that strategy, the Chinese economy is today much bigger than what it may have been."

For the future, I assume that we may not be able to judge well what will work in China and other developing countries, because some critical issues are beginning to emerge, and innovations are taking place not only in the manufacture of products and production of agricultural and mineral products, but also in how governing bodies operate. The environmental and energy crises are affecting what policy makers and the public are willing to do, but the current crisis is not yet reflected in the growth rates. According to Joerss, Woetzel, and Zhang (2009), China has implemented an extensive body of regulations to ensure that it has sufficient and secure energy resources for its continued economic growth, while mitigating the effect of growth on the environment. China is skillfully combining market forces with planned directives.

I do not see everything through these rose-tinted glasses. Members of my research team (and others) have determined that the energy intensity in China has fallen dramatically since 1978—by as much as 67 percent, partially, we find, because of

changes in technology, especially the replacement of obsolete, polluting, energy-inefficient plant and equipment—but that recently the energy intensity in China has turned upward. Rosen and Houser (2007) attribute this mainly to the return to reliance on heavy industry, but from our fieldwork on the coke and steel sectors in China, I think one major important reason may be because the plant managers have not invested in maintenance of their plant and equipment. New equipment that replaces 50-year-old equipment obviously will use less energy and pollute less, but time and again plant managers have indicated to me that they did not purchase the maintenance packages. Money saved in the short term, I think, will come back to haunt China.

Conclusions

I grant the importance of industrial policy in helping to promote economic growth rates in the past and present in many countries. Stopping at that conclusion, however, does not allow us to explore important questions concerning the roles played by the following policies: infrastructure, including its maintenance; education; health; property rights and related institutions; environmental and energy; poverty alleviation; and, of course, given my main area of interest, regional.

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