The State and industrial policy in Chinese economic development

11

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11.1 Introduction

The explanation of Chinese economic development over the past three decades, i.e. the era of market reform and increasing integration into the world market, has been a matter of scholarly debate. There exists a substantial body of studies that highlight the crucial role of the State in the development process (see, for example, Felipe et al., 2010; Gabriele, 2010; Heilmann, 2009; Kotz, 2005; Poon, 2009). These include studies that are in the tradition of theories of industrial policy that have been developed with reference to the broader experience of East Asian industrialization.

Conceptually, industrial policy is usually defined as addressing structural change of the economy – sustained rapid industrialization, in the Chinese case. But structural change is necessarily a complex process with multiple determinants, most importantly the productivity and demand regimes in question as well as the underlying institutional framework. Therefore, assessing the role of the State in the development process requires an analysis of the coherence of state influences over these multiple determinants. To ascertain the efficacy of state industrial policy further requires analysis of the appropriate match – or mismatch – between the policy design and implementation, on the one hand, and the interaction of these multiple determinants, on the other.

This chapter endeavours to show that the role of the State in Chinese economic development has been complex and multifaceted. It is much more than a case of East Asian-type industrial policy in action, where the State practises selective intervention in business activities with a view to promoting the development of targeted industries or projects. We seek to show that state influences on

Chinese economic development have taken the form of both creating the enabling environment and direct intervention, the latter encompassing industrial policy. We argue that, on the whole, the State has played a significantly positive role in Chinese economic development – in terms of promoting structural change and thereby growth in productivity and employment. There are, however, important policy lessons to learn from the complexities of the experience, which includes both successes and failures.

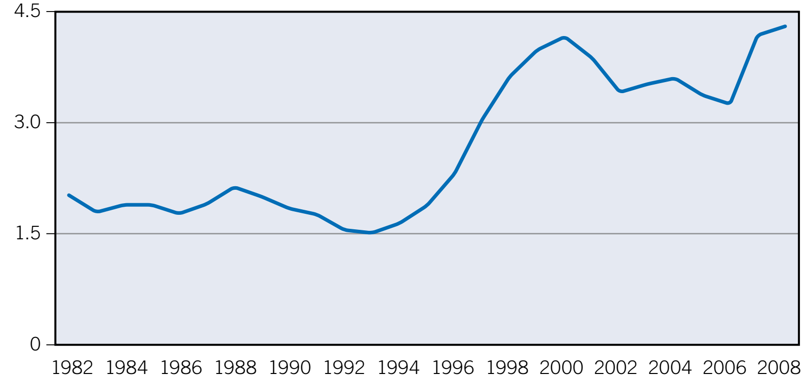
The chapter is organized in five sections. Following this introduction, section 11.2 identifies four main stylized facts of Chinese economic transformation that are posited to form the foundation for any plausible inquiry into the role of the State in the development process. The section then discusses the implications of, and relationships between, these stylized facts, with reference to the industrial policy literature and broader theories. Section 11.3 analyses the specific actions of the State with respect to promoting industrialization, at the levels of creating the enabling environment and direct intervention. It also analyses the efficacy of industrial policy with reference to the development experiences of three particular industries – automobile, semiconductor, and high-speed railways. Section 11.4 turns to discussion of the related issue of the evolution of the policy orientation of the State, particularly with respect to labour compensation and protection. Section 11.5 sums up.

11.2 Stylized facts of Chinese economic transformation and implications

Industrial policy, and state economic actions in general, can have positive, neutral or negative effects on economic development, depending on the nature of the overall process of structural transformation. In the Chinese case, any analysis of the role of the State and state industrial policy in the development process of the past three decades must take into consideration the following four important stylized facts (Lo and Li, 2011; Lo and Zhang, 2011).

Structural change. Chinese economic development has undergone a transition from labour-intensive industrialization in the first half of the reform era, circa 1978–92, to capital-deepening industrialization in the second half. Figure 11.1 charts the evolution of the incremental capital–output ratio (ICOR) of the Chinese economy. It is apparent that the economic growth path was characterized by the substitution of labour for capital in production in the first half of the reform era but has shifted to rely on capital deepening from the early 1990s onward.

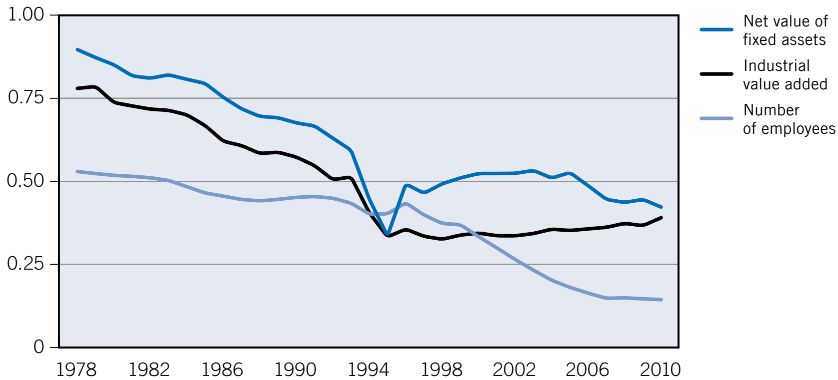
Figure 11.1 Incremental capital-output ratio (five-year moving averages), 1982–2008



Note: *ICOR* = *dK/dY*, where *dK* = *I* = total fixed asset investment, *dY* = GDP of current year minus GDP of the previous year.

Source: *China Statistical Yearbook*, various years.

Figure 11.2 Shares of state-owned enterprises in output, employment and capital of total industry, 1978–2010



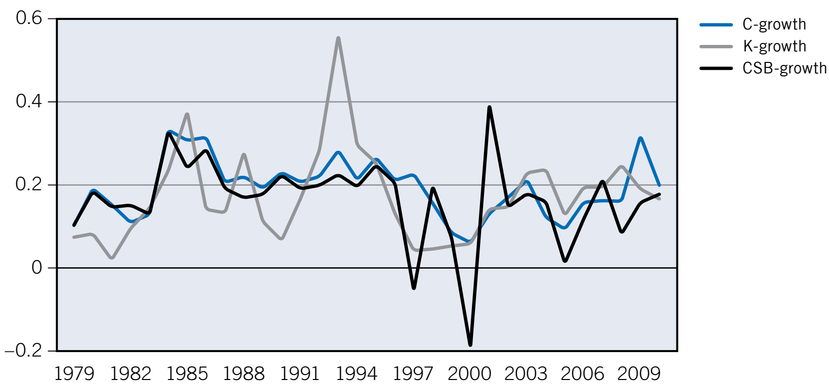
Note: A significant proportion of non-state-owned enterprises also have state agents as the ultimate owners–controllers.

Source: *China Statistical Yearbook*, various years.

State ownership and control over economic activities. State ownership predominated in the first half of the reform era and has remained a significant part of the economy in the second half. For industry alone, the value added share accounted for by state-owned enterprises (SOEs) underwent a secular decline from 78 per cent in 1978 to 32 per cent in 1998. Thereafter, the share has increased steadily, reaching 38 per cent by 2010 (figure 11.2). What has remained of state industry is mostly large-scale, capital-intensive SOEs, as indicated by the fact that the capital share of SOEs has significantly exceeded the output share, whereas the employment share has been far lower, i.e. SOEs are characterized by a much higher capital-labour ratio than other enterprises. SOEs have continued to control the “commanding heights” of Chinese industry. In the meantime, perhaps of equal importance is the continuing state control over the allocation of the financial resources of the economy. As of 2010 state banks still, directly or indirectly, accounted for more than 70 per cent of the total assets of the banking sector (Lo and Jiang, 2011). And the banking sector has remained the predominant part of the financial system as a whole.

State capacity. On the whole, decentralization of state power has characterized the Chinese economic transformation. Local governments at different levels have been powerful players in economic decision-making. The interaction between central and local governments – sometimes synergic, sometimes mutually defeating – has thus had strong influences over the direction and pace of economic development. These influences should be seen in the broader context of continuous market liberalization. State firms have become increasingly profit-oriented over the reform era. This shift has taken place amid the continuous expansion of non-state firms as well as the increase in competition in the market environment due to both internal and external liberalization. The character of these attributes of market liberalization is difficult to gauge in a clear and straightforward way. One possible indication is the working of the commercialized (and partly privatized) state banks, which are representative of the workings

Figure 11.3 Annual growth of capital formation and bank loans, 1979–2009



Note: K-growth = growth of gross fixed capital formation, C-growth = growth of year-end outstanding loans of the total banking sector, CSB-growth = growth of year-end outstanding loans of state banks.
Source: *China Statistical Yearbook*, various years.

of the mixed economic system. Figure 11.3 shows the annual growth of fixed-asset investment and total outstanding loans by state banks and the banking sector as a whole. Two important characteristics of the workings of the banks, and state banks in particular, are discernible. First, they have exhibited an inclination towards severe fluctuations between expansion and contraction – an amplified phenomenon of Minskyan-type financial instability that characterizes the notional market system. Second, they have been strongly supportive of productive investment over the long term. It is this system that the State has to work with in its action for promoting industrialization.[1]

Evolution of demand regimes. It is well known that Chinese economic development in the first half of the reform era was mainly consumption-led, but it has become mainly investment-led (and, to a much lesser extent, export-led) since the early 1990s (Lo and Zhang, 2011). The share of aggregate expenditures accounted for by final consumption decreased by more than 10 percentage points from the first period to the second. Nevertheless, in both periods the reformed economic system has been able to provide the necessary demand conditions for industrialization – for promoting productive investment and for underpinning the increasing returns of the established industries. It should be noted that China started its reform era with one of the highest industry-to-GDP ratios in the world in the late 1970s and has witnessed a process of sustained rapid industrialization throughout the three decades that have followed.

What are the implications of these stylized facts for assessing the role of the State and of state industrial policy in Chinese economic development? In the first place, the stylized fact concerning structural change is immediately relevant to the literature on East Asian-type industrial policy, which has been dominated by the debate over comparative advantage-following (CAF) versus comparative advantage-defying (CAD) strategies (see the exchange in Lin and Chang, 2009). It seems reasonable to conclude that Chinese industrialization in the first half of the reform era was on a CAF path, whilst that in the second half has been on a CAD path. Even if this judgement is valid, however, analysing the CAF–CAD characteristics of structural change might be insufficient to ascertain the role of industrial policy. Theoretically, it could be argued that a CAF path of structural change is in line with market principles (although this begs the question of whether the market can actually produce such outcomes). Even so, it does not follow that a CAD path of structural change must be the product of state intervention or, more

[1] For further details on the characteristics of Chinese finance and state actions to curb excessive fluctuations and promote productive investment, see Lo and Jiang (2011).

specifically, of state industrial policy. In a world of increasing returns and demand-led productivity growth, the demand regimes matter in shaping the path of structural change. Thus, the question remains as to what, in the Chinese experience, has been the role of state actions in shaping the evolution of the demand regimes, as characterized in the fourth stylized fact.

Meanwhile, the industrial policy literature also addresses the conditions for the working of alternative development policies. In particular, there is the further debate on the developmental state versus crony capitalism. Stylized facts two and three, concerning the position of the State in the economic system, must be taken into account in a coherent framework of analysis. Whereas the existence of a sizeable state sector provides a powerful means for state intervention in shaping the directions of economic development, the economic agents in question – the enterprises, state banks, and local governments of different levels – might not necessarily work in line with the character of the developmental state. It is evident that, in the context of a mixed system associated with stylized facts two and three, these agents have from time to time fluctuated among characteristics of short-term profit orientation, long-term developmental concerns, and rent-seeking and crony capitalism. Ascertaining the role of the State and state industrial policy in the transformation process requires an analysis of the conditions that allow one set of characteristics to dominate the others.

The preceding discussion can be related to the literature of competing policy doctrines and theoretical positions concerning late industrialization. A convenient way to review this hotly contested issue is to start with the "orthodox" position, known as the Washington Consensus. Its canonical policy doctrine in this particular area, "trade regime neutrality" as an industrialization strategy, hinges on the assumption that technological transfer and thereby economic development is an automatic outcome of the market (Lo, 2012). This doctrine is consistent with standard neoclassical growth theory. But, even within neoclassical economics, the mainstream of theories of endogenous technological change suggests that technology is mainly the product of investment, and business investment typically presupposes some degree of exclusive rights over the utilization of the product (Romer, 1994). Hence, technological development necessarily requires the existence of a policy–institutional environment that is not confined to the market.

More recently, a modified position from the Washington institutions has been advocated by World Bank chief economist Justin Yifu Lin and shared by economists such as Dani Rodrik and Joseph Stiglitz. The central proposition is that structural change in line with the principle of comparative advantage (i.e. CAF) might not always materialize, because of market failures in delivering the necessary technological development. Thus, it follows that there is a need for some forms of market-friendly government intervention to foster industrialization (Lin, 2010).

Yet another position further from the orthodox view is embodied in the theories of industrial policy associated with the work of economists such as Alice Amsden, Ha-Joon Chang, Ajit Singh and Robert Wade. The central proposition is that, given the importance of dynamic increasing returns and economies of scale and scope in economic development, industrialization is more than realizing the principle of comparative advantage, Hence, there is the need for market-orienting government intervention to foster industrialization, i.e. to deliberately distort the market in order to promote technological development (Chang, 2009). The precise means can vary, but the general point is for the government to create "economic rents" (for a clearly defined period) that are awarded to firms with good performance in technological and economic development.

Finally, the position of theories of the "national innovation system", most clearly framed by William Lazonick (2004 and 2009), puts technological development at the centre of industrialization. The central proposition is that, in the era of the information revolution, the precondition for late development is the building up, not just of production capacity as such, but also of the innovation capability for absorbing, assimilating and improving upon imported technology. This requires a range of long-term oriented business institutions in addition to government promotion.

Across the various positions summarized above, there is a progressive shift from pure theory to realism. The Washington Consensus and the modified positions of the Washington institutions implicitly assume a pure market within which productivity-improving structural change takes place. The theories of industrial policy and the "national innovation system", in contrast, are more aware of the complex and shifting nature of the world market in reality. In particular, in recent years an influential view has emerged claiming that the process of globalization, including North–South economic relations, has been increasingly shaped by financialization (Wade, 2006 and 2008). The rising predominance of speculative financial activities implies a tendency of short-termism, i.e. capital is increasingly forced to minimize fixed investment and demand "flexibility" in the productive sector (especially in labour employment). From the perspective of developing economies, therefore, relying solely on the working of the market might make it difficult for their industries to move out of the assembling stage and up the value added ladder. More important, in the context of financialization and the associated pressing demand for flexibility, developing economies need to find appropriate ways to raise their productivity fast enough to avoid being stuck in the "race to the bottom" in the world market (Lo, 2012).

11.3 The strength and limitation of state industrial policy in action

Against the background described above, the role of the State in Chinese economic transformation can be inferred from its action/inaction in two different respects. The first concerns its role in the creation of an appropriate condition (i.e. enabling environment), or otherwise, for industrialization. The second concerns its direct intervention in the process of industrialization.[2]

In the first half of the reform era, state action in the first respect and inaction in the second respect were the norm. Based on the capital accumulation of the pre-reform era, i.e. the building-up of a vast capital goods sector in the 1950s–1970s, it was possible to let economic development follow a path of consumption-led, labour-intensive industrialization. This path broadly accorded with the principle of comparative advantage. It arose mainly through the market-directed, explosive expansion of collectively owned rural (township and village) enterprises. The action of the State focused on fostering market reform, with SOEs being designated to take up the burden of the adjustment cost associated with the reform. SOEs together with state banks were responsible for sustaining the existing pattern of egalitarian income distribution. They provided job security and social services for virtually the entire urban population, thus fostering the "consumption revolution", which was essential for the industrialization drive of that period.

In the second half of the reform era, state intervention was evident in both respects – after a painful, neoliberal process of restructuring public finance, SOEs and state banks in the mid-1990s. Public finance took the lead in massive infrastructural investment and investment in industrial upgrading. This gave rise to the path of capital-deepening, investment-led industrialization, carried out mainly by SOEs in upstream materials industries and transnational corporations (TNCs) in high-tech industries. What remained of SOEs was mostly big firms with a profit orientation; these characteristics fit well with the prevailing path of industrialization. Commercialized state banks, whilst for a time becoming reluctant to